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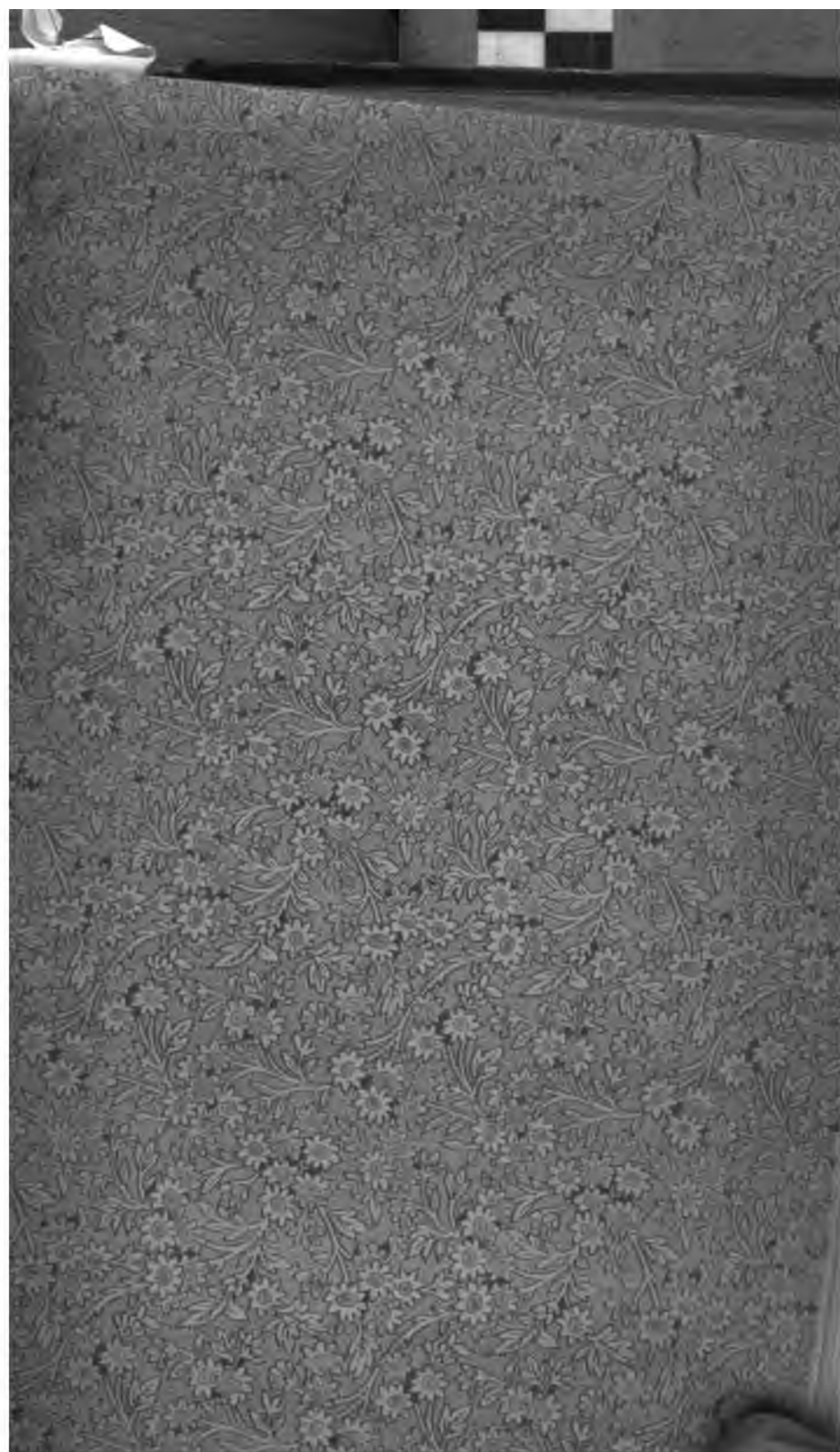
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LIFE AND WORKS

OF

HORACE MANN

VOL. III.





# ANNUAL REPORTS

OF THE

SECRETARY OF THE BOARD OF EDUCATION  
OF MASSACHUSETTS FOR THE  
YEARS 1839-1844

BY

HORACE MANN

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# ANNUAL REPORTS

OF THE

## SECRETARY OF THE BOARD OF EDUCATION.

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REPORT FOR 1839.

GENTLEMEN, —

. . . I FEEL fully justified in affirming that the prospects of the rising generation are daily growing brighter by means of the increasing light which is shed upon them from our Common Schools. I refer here, more particularly, to such proofs as are hardly susceptible of being condensed into statistical tables, or even of being presented as isolated facts: these speak for themselves. But I refer to such indications of returning health as prove to the watchful attendant that the crisis of the malady has passed. Stronger feelings and firmer convictions of the importance of our Common Schools are taking possession of the public mind; and, where they have not yet manifested themselves in any outward and visible improvement, they are silently and gradually working to that end.

In determining the rate of annual advancement, however, which the friends of this cause are authorized reasonably to expect, it should not be forgotten that all improvements in the system depend ultimately upon the people themselves, and upon the school officers, whom, in their several towns

and districts, they see fit to elect. All improvements in the schools, therefore, suppose and require a simultaneous and corresponding improvement in public sentiment, and in the liberality of the citizens, who, by a major vote, from year to year, measure out the pecuniary means for their support, and elect the officers who are to superintend the application of those means. Progress which must be so thorough must necessarily be slow. But the thoroughness is a compensation for the slowness; for, when a revolution is once wrought, it will be enduring. The Legislature, having conferred upon the Board of Education no authority as to the amount of money to be raised, the teachers to be employed, the books, apparatus, or other instruments of instruction to be used, the condition of the houses in which the schools are taught, nor, indeed, as to any other subject, which can, in the slightest degree, abridge the power or touch the property of towns or districts, the responsibility, in all these respects, continues to rest, where it always has rested, and where, it is to be hoped, it always will rest, with the towns and districts themselves. On these points, encouragement may be highly beneficial: compulsion would counterwork its own purposes.

Hence, it is obvious, that if the Board or the Legislature should devise and promulgate the wisest system imaginable, and define the exact processes by which it could be executed, and all its fruits realized, the administration of that system must still be left with the local authorities. In the last stage of the process, and at the very point where the means are applied to the objects, they must pass through the hands of the town and district officers, and of the teachers whom they employ. In our system of public instruction, therefore, it is emphatically true, that the influences flowing from the Legislature, or from any advisory body, may have their quality entirely changed by being assimilated to the character and views of the men through whose hands they eventually pass; just as the nutritious juices which ascend from the roots of a tree may lose their original properties, and be made



to produce fruits of various flavor, according to the nature of the ingrafted scions through whose transforming pores they flow. Wherever, therefore, we find improvements in the schools, it is a gratifying proof that higher views are prevailing in the community in which those improvements originate.

I advert to these facts respecting the authority, or rather the want of authority, in the Board, and their entire dependence upon the efficient co-operation of the public, because I occasionally meet with misapprehensions respecting their office and powers and consequent duties; some persons looking to the Board for action in matters of which they have not the slightest official cognizance, and others deploring their possession of powers, of which there is no trace nor indication to be found, either in the law which created them, or in any of their official or unofficial proceedings.

. . . To those whose views of public and private duty can never be satisfied by any thing short of a universal education for the people, it will be gratifying to be informed, that a new interest has been excited, during the last year, in behalf of the children of persons employed upon our public works. This class of children, heretofore, has not shared in the provisions for education made by our laws, and has rarely been embraced in any of the numerous plans for moral improvement, devised and sustained by private charity; and hence they have been growing up in the midst of our institutions, uninstructed even in those rudiments of knowledge, without which self-education is hardly practicable. During the last year, a few inhabitants of the town of Middlefield (which is situated in the western part of Hampshire County), commiserating the destitute condition of the children along the line of the railroad in their vicinity, took active measures to supply them with the means of instruction. A gentleman of that town, Mr. Alexander Ingham, was the first to engage in, and has been most active in carrying on, this Samaritan enterprise. The good example extended; and a considerable

number of children along the line of work were soon gathered, either into the public schools, or, where that was impracticable, into schools established expressly for them, at private expense. At the Common-school Convention in the county of Hampden, held in the month of August last, the condition of these children, and the necessity of some further measures in their behalf, constituted one of the topics of inquiry and discussion. A committee was appointed, of which Mr. Ingham was chairman, to collect the facts of the case. From this committee, I have learned that there were, in the month of September last, more than three hundred children, between the ages of four and sixteen, belonging to the laborers on the railroad west of Connecticut River, who were not considered as entitled to the privileges of the public schools, or were in such a local situation as not to be able to attend them. A pregnant fact also, in relation to the subject, is, that, in the enumeration of all the children of all ages, belonging to that class of people, "a large proportion of them are under the age of four years." Owing to efforts since made by private individuals, a very large majority of all these children, who are of a suitable age, are now enjoying the benefits of Common-school education.

Another subject, respecting which I have sought for information from all authentic sources, and to which I have given especial attention in my circuit through the State, is the observance or non-observance of the law "for the better instruction of youth employed in manufacturing establishments." This law was enacted in April, 1836, and was to take effect on the first day of April, 1837. The substance of its provisions is, that no owner, agent, or superintendent of any manufacturing establishment, shall employ any child, under the age of fifteen years, to labor in such establishment, unless such child shall have attended some public or private day school, where instruction is given by a legally qualified teacher, at least three months of the twelve months next preceding any and every year in which such child shall be

so employed. The penalty for each violation is fifty dollars. The law has now been in operation sufficiently long to make manifest the intentions of those to whom its provisions apply, and whether those humane provisions are likely to be observed or defeated. From the information obtained, I feel fully authorized to say, that, in the great majority of cases, the law is obeyed. But it is my painful duty also to say, that, in some places, it has been uniformly and systematically disregarded. The law is best observed in the largest manufacturing places. In several of the most extensive manufacturing villages and districts, all practicable measures are taken to prevent a single instance of violation. Some establishments have conducted most generously towards the schools; and, in one case (at Waltham), a corporation, besides paying its proportion of taxes for the support of the public schools in the town, has gratuitously erected three school-houses, — the last in 1837, a neat, handsome, modern stone building, two stories in height, — and maintained schools therein, at a charge, in the whole, upon the corporate funds, of a *principal* sum of more than seven thousand dollars. It would be improper for me here to be more particular than to say, that these generous acts have been done by the "*Boston Manufacturing Company*;" though all will regret that the identity of the individual members who have performed these praiseworthy deeds should be lost in the generality of the corporate name.

Comparatively speaking, there seems to have been far greater disregard of the law by private individuals and by small corporations, especially where the premises are rented from year to year, or from term to term, than by the owners or agents of large establishments. Private individuals, renting an establishment for one or for a few years, — intending to realize from it what profits they can, and then to abandon it, and remove from the neighborhood or town where it is situated, — may be supposed to feel less permanent interest in the condition of the people who are growing up around

them; and they are less under the control of public opinion in the vicinity. But, without seeking an explanation of the cause, there cannot be a doubt as to the fact.

It is obvious that the consent of two parties is necessary to the infraction of this law, and to the infliction of this highest species of injustice upon the children whom it was designed to protect. Not only must the employer pursue a course of action by which the godlike powers and capacities of the human soul are wrought into thorough-made products of ignorance and misery and vice with as much certainty and celerity as his raw materials of wool or cotton are wrought into fabrics for the market by his own machinery, but the parent also must be willing to convert the holy relation of parent and child into the unholy one of master and slave, and to sell his child into ransomless bondage for the pittance of money he can earn. Yet, strange to say, there are many parents, not only of our immigrant, but of our native population, so lost to the sacred nature of the relation they sustain towards the children whom they have brought into all the solemn realities of existence, that they go from town to town, seeking opportunities to consign them to unbroken, bodily toil, although it involves the deprivation of all the means of intellectual and moral growth; thus pandering to their own vicious appetites by adopting the most efficient measures to make their offspring as vicious as themselves.

If, in a portion of the manufacturing districts in the State, a regular and systematic obedience is paid to the law, while, in other places, it is regularly and systematically disregarded, the inevitable consequences to the latter will be obvious upon a moment's reflection. The neighborhood or town where the law is broken will soon become the receptacle of the poorest, most vicious, and abandoned parents, who are bringing up their children to be also as poor, vicious, and abandoned as themselves. The whole class of parents who cannot obtain employment for their children at one place,

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but are welcomed at another, will circulate through the body politic, until at last they will settle down as permanent residents in the latter; like the vicious humors of the natural body, which, being thrown off by every healthy part, at last accumulate, and settle upon a diseased spot. Every breach of this law, therefore, inflicts direct and positive injustice, not only upon the children employed, but upon all the industrious and honest communities in which they are employed; because its effect will be to fill those communities with paupers and criminals, or, at least, with a class of persons, who, without being absolute, technical paupers, draw their subsistence in a thousand indirect ways from the neighborhood where they reside; and, without being absolute criminals in the eye of the law, still commit a thousand injurious, predatory acts, more harassing and annoying to the peace and security of a village than many classes of positive crimes.

While water-power only is used for manufacturing purposes, a natural limit is affixed, in every place, to the extension of manufactories. The power being all taken up in any place, the further investment of capital, and the employment of an increased number of operatives, must cease. While we restrict ourselves to the propulsion of machinery by water, therefore, it is impossible that we should have such an extensive manufacturing district as, for instance, that of Manchester in England, because we have no streams of sufficient magnitude for the purpose. But Massachusetts is already the greatest manufacturing State in the Union. Her best sites are all taken up; and yet her disposition to manufacture appears not to be checked. Under such circumstances, it seems not improbable that steam-power will be resorted to. Indeed, this is already done to some extent. Should such improvements be made in the use of steam, or such new markets be opened for the sale of manufactured products, that capitalists, by selecting sites where the expense of transportation, both of the raw material and of the



finished article, may be so reduced as, on the whole, to make it profitable to manufacture by steam, then that agency will be forthwith employed; and, if steam is employed, there is no assignable limit to the amount of a manufacturing population that may be gathered into a single manufacturing district. If, therefore, we would not have, in any subsequent time, a population like that of the immense city of Manchester, where great numbers of the laboring population live in the filthiest streets, and mostly in houses which are framed back to back, so that, in no case, is there any yard behind them, but all ingress and egress, for all purposes, is between the front side of the house and the public street,—if we would not have such a population, we must not only have preventive laws, but we must see that no cupidity, no contempt of the public welfare for the sake of private gain, is allowed openly to violate or clandestinely to evade them. It would, indeed, be most lamentable and self-contradictory, if, with all our institutions devised and prepared on the hypothesis of common intelligence and virtue, we should rear a class of children to be set apart, and, as it were, dedicated to ignorance and vice.

After presenting to the Board one further consideration, I will leave this subject. It is obvious that children of ten, twelve, or fourteen years of age may be steadily worked in our manufactories, without any schooling, and that this cruel deprivation may be persevered in for six, eight, or ten years, and yet, during all this period, no very alarming outbreak shall occur to rouse the public mind from its guilty slumber. The children are in their years of minority, and they have no control over their own time or their own actions. The bell is to them what the water-wheel and the main shaft are to the machinery which they superintend. The wheel revolves, and the machinery must go; the bell rings, and the children must assemble. In their hours of work, they are under the police of the establishment: at other times, they are under the police of the neighborhood. Hence this state of things



may continue for years, and the peace of the neighborhood remain undisturbed, except, perhaps, by a few nocturnal or sabbath-day depredations. The ordinary movements of society may go on without any shocks or collisions; as, in the human system, a disease may work at the vitals, and gain a fatal ascendancy there, before it manifests itself on the surface. But the punishment for such an offence will not be remitted because its infliction is postponed. The retribution, indeed, is not postponed, it only awaits the full completion of the offence; for this is a crime of such magnitude, that it requires years for the criminal to perpetrate it in, and to finish it off thoroughly in all its parts. But when the children pass from the condition of restraint to that of freedom, from years of enforced but impatient servitude to that independence for which they have secretly pined, and to which they have looked forward, not merely as the period of emancipation, but of long-delayed indulgence; when they become strong in the passions and propensities that grow up spontaneously, but are weak in the moral powers that control them, and blind in the intellect which foresees their tendencies; when, according to the course of our political institutions, they go, by one bound, from the political nothingness of a child to the political sovereignty of a man, — then, for that people who so cruelly neglected and injured them, there will assuredly come a day of retribution. It scarcely needs to be added, on the other hand, that if the wants of the spiritual nature of a child, in the successive stages of its growth, are duly supplied, then a regularity in manual employment is converted from a servitude into a useful habit of diligence, and the child grows up in a daily perception of the wonder-working power of industry, and in the daily realization of the trophies of victorious labor. A majority of the most useful men who have ever lived were formed under the happy necessity of mingling bodily with mental exertion.

But by far the most important subject respecting which I have sought for information during the year remains to be

noticed. While we are in little danger of over-estimating the value of Common Schools, yet we shall err egregiously if we regard them as ends, and not as means. A forgetfulness of this distinction would send the mass of our children of both sexes into the world scantily provided either with the ability or the disposition to perform even the most ordinary duties of life. Common Schools derive their value from the fact that they are an instrument more extensively applicable to the whole mass of the children than any other instrument ever yet devised. They are an instrument by which the good men in society can send redeeming influences to those children who suffer under the calamity of vicious parentage and evil domestic associations. The world is full of lamentable proofs that the institution of the family may exist for an indefinite number of generations without mitigating the horrors of barbarism. But the institution of Common Schools is the offspring of an advanced state of civilization, and is incapable of co-existing with barbarian life, because, should barbarism prevail, it would destroy the schools; should the schools prevail, they would destroy barbarism. They are the only civil institution capable of extending its beneficent arms to embrace and to cultivate in all parts of its nature every child that comes into the world. Nor can it be forgotten that there is no other instrumentality which has done or can do so much to inspire that universal reverence for knowledge which incites to its acquisition. Still, these schools are means, and not ends. They confer instruments for the acquisition of an object, but they are not the object itself. As they now are, or, indeed, are ever likely to become, our young men and young women will be most insufficiently prepared to meet the various demands which life will make upon them, if they possess nothing but what these schools bestow.

✓ *Libraries.* — After the rising generation have acquired habits of intelligent reading in our schools, *what shall they read?*

for, with no books to read, the power of reading will be useless; and, with bad books to read, the consequences will be as much worse than ignorance as wisdom is better. What books, then, are there accessible to the great mass of the children in the State, adapted to their moral and intellectual wants, and fitted to nourish their minds with the elements of uprightness and wisdom?

Let any person go into one of our country towns or districts of average size, consisting, as most of them do, of an agricultural population, interspersed with mechanics, and here and there a few manufacturers, and inquire from house to house what books are possessed, and he will probably find the Scriptures and a few school-books in almost every family. These are protected by law, even in the hands of an insolvent; so that the poor are as secure in their possession as the rich. In the houses of professional men, — the minister, the lawyer, the physician, — he would find small professional libraries, intermixed with some miscellaneous works not of professional character; in the houses of religious persons, a few religious books of this or that class, according to the faith of the owner; in the houses of the more wealthy, where wealth is fortunately combined with intelligence and good taste, some really useful and instructive books; but where the wealth is unfortunately united with a love of display, or with feeble powers of thought, he would find a few elegantly-bound annuals, and novels of a recent emission. What he would find in other houses — and these the majority — would be few, and of a most miscellaneous character; books which had found their way thither rather by chance than by design, and ranging in their character between very good and very bad. Rarely, in such a town as I have supposed, will a book be found which treats of the nature, object, and abuses of different kinds of governments, and of the basis and constitution and fabric of our own; or one on economical or statistical science; or a treatise on general ethics and the philosophy of the human mind; or popular or intelligible expla-

nations of the applications of science to agriculture and the useful arts, or the processes by which the latter are made so eminently serviceable to man. Rarely will any book be found partaking of the character of an encyclopædia, by a reference to which, thousands of interesting questions, as they daily arise, might be solved, and great accessions to the stock of valuable knowledge be imperceptibly made; quite as rarely will any books containing the lives of eminent British or American statesmen be found, or books treating of our ante-Revolutionary history; and, most rarely of all, will any book be found on education, — education at home, physical, intellectual, and those rudiments of a moral and religious education in which all agree, — the most important subject that can possibly be named to parent, patriot, philanthropist, or Christian. And in the almost total absence of books adapted to instruct parents how to educate their children, so there are quite as few which are adapted to the capacities of the children themselves, and might serve, in some secondary degree, to supply the place of the former. Some exceptions would, of course, be expected where so many particulars are grouped under so few heads; but from all I have been able to learn, after improving every opportunity for inquiry and correspondence, I am led to believe, that, as it regards the *private* ownership of books, the above may be taken as a fair medium for the State. In small towns, almost wholly rural in their occupation, the books, though fewer, may generally be better; while in cities and large towns, though more numerous, yet a larger proportion of them is worse. Whatever means exist, then, either for inspiring or for gratifying a love of reading in the great mass of the rising generation, are mainly to be found, if found at all, in public libraries.

As the tastes and habits of the future men and women, in regard to reading, will be only an enlargement and expansion of the tastes and habits of the present children, it seemed to me one of the most desirable of all facts, to learn, as far as practicable, under what general influences those tastes and

habits are now daily forming. For who can think, without emotion, and who can remain inactive under the conviction, that every day which now passes is, by the immutable law of cause and effect, predestinating the condition of the community twenty, thirty, or forty years hence; that the web of their character and fortunes is now going through the loom, to come out of it, at that time, of worthy or of worthless quality, beautified with colors and shapes of excellence, or deformed by hideousness, just according to the kind of the woof which we are daily weaving into its texture? Every book which a child reads with intelligence is like a cast of the weaver's shuttle, adding another thread to the indestructible web of existence.

In the general want of private libraries, therefore, I have endeavored to learn what number of public libraries exist; how many volumes they contain, and what are their general character, scope, and tendency; how many persons have access to them, or, which is the most material point, how many persons do *not* have access to them; and, finally, how many of the books are adapted to prepare children to be free citizens and men, fathers and mothers, even in the most limited signification of those vastly comprehensive words. It seemed to me, therefore, that nothing could have greater interest or significance than an inventory of the means of knowledge, and the encouragements to self-education, possessed by the present and the rising generation.

Simultaneously with this inquiry I have pursued a collateral one, not so closely, although closely, connected with the main object. A class of institutions has lately sprung up in this State, universally known by the name of Lyceums, or Mechanics' Institutes, before some of which courses of Popular Lectures, on literary or scientific subjects, are annually delivered, while others possess libraries and reading-rooms, and in a very few cases both these objects are combined. These institutions have the same general purpose in view as public libraries, viz. that of diffusing instructive and enter-

taining knowledge, and of exciting a curiosity to acquire it; though they are greatly inferior to libraries in point of efficiency. As the proportion of young persons who attend these lectures and frequent these reading-rooms, compared with the whole number of attendants, is much greater than the proportion they bear to the whole people, the institutions may justly be regarded as one of the means now in operation for enlightning the youth of the State. At any rate, an inventory of the means of general intelligence which did not include these institutions would justly be regarded as incomplete.

For the purpose of obtaining authentic information on the above-mentioned subjects, I addressed to school committees and other intelligent men residing, respectively, in every town in the Commonwealth, a few inquiries, by which I ascertained that, omitting the ten Circulating Libraries, containing about twenty-eight thousand volumes, it appears that the aggregate of volumes in the public libraries of all kinds in the State is about three hundred thousand. This is also exclusive of the Sabbath-school Libraries, which will be adverted to hereafter. To these three hundred thousand volumes but little more than one hundred thousand persons, or one-seventh part of the population of the State, have any right of access, while more than six hundred thousand have no right therein.

Of the towns heard from, there are one hundred (almost one third of the whole number in the State) which have neither a town, social, nor district school library therein. What strikes us with amazement, in looking at these facts, is the inequality with which the means of knowledge are spread over the surface of the State; a few deep, capacious reservoirs, surrounded by broad wastes. It has long been a common remark that many persons read too much; but here we have proof how many thousands read too little. For the poor man and the laboring man the art of printing seems hardly yet to have been discovered.

The next question respects the character of the books composing the libraries, and their adaptation to the capacities and mental condition of children and youth. In regard to this point there is, as might be expected, but little diversity of statement. Almost all the answers concur in the opinion that the contents of the libraries are not adapted to the intellectual and moral wants of the young; an opinion which a reference to the titles in the catalogues will fully sustain. With very few exceptions the books were written for adults, for persons of some maturity of mind, and possessed already of a considerable fund of information; and, therefore, they could not be adapted to children, except through mistake. Of course, in the whole collectively considered there is every kind of books; but probably no other kind, which can be deemed of a useful character, occupies so much space upon the shelves of the libraries as the historical class. Some of the various histories of Greece and Rome; the History of Modern Europe, by Russell; of England, by Hume and his successors; Robertson's Charles V.; Mavor's Universal History; the numerous histories of Napoleon, and similar works, constitute the staple of many libraries. And how little do these books contain which is suitable for children! How little do they record but the destruction of human life, and the activity of those misguided energies of men which have hitherto almost baffled the beneficent intentions of Nature for human happiness! Descriptions of battles, sackings of cities, and the captivity of nations, follow each other with the quickest movement, and in an endless succession. Almost the only glimpses which we catch of the education of youth present them as engaged in martial sports, and in mimic feats of arms, preparatory to the grand tragedies of battle; exercises and exhibitions, which, both in the performer and the spectator, cultivate all the dissocial emotions, and turn the whole current of the mental forces into the channel of destructiveness. The reader sees inventive genius, not employed in perfecting the useful arts, but exhausting itself in



them; and they are less under the control of public opinion in the vicinity. But, without seeking an explanation of the cause, there cannot be a doubt as to the fact.

It is obvious that the consent of two parties is necessary to the infraction of this law, and to the infliction of this highest species of injustice upon the children whom it was designed to protect. Not only must the employer pursue a course of action by which the godlike powers and capacities of the human soul are wrought into thorough-made products of ignorance and misery and vice with as much certainty and celerity as his raw materials of wool or cotton are wrought into fabrics for the market by his own machinery, but the parent also must be willing to convert the holy relation of parent and child into the unholy one of master and slave, and to sell his child into ransomless bondage for the pittance of money he can earn. Yet, strange to say, there are many parents, not only of our immigrant, but of our native population, so lost to the sacred nature of the relation they sustain towards the children whom they have brought into all the solemn realities of existence, that they go from town to town, seeking opportunities to consign them to unbroken, bodily toil, although it involves the deprivation of all the means of intellectual and moral growth; thus pandering to their own vicious appetites by adopting the most efficient measures to make their offspring as vicious as themselves.

If, in a portion of the manufacturing districts in the State, a regular and systematic obedience is paid to the law, while, in other places, it is regularly and systematically disregarded, the inevitable consequences to the latter will be obvious upon a moment's reflection. The neighborhood or town where the law is broken will soon become the receptacle of the poorest, most vicious, and abandoned parents, who are bringing up their children to be also as poor, vicious, and abandoned as themselves. The whole class of parents who cannot obtain employment for their children at one place,

but are welcomed at another, will circulate through the body politic, until at last they will settle down as permanent residents in the latter; like the vicious humors of the natural body, which, being thrown off by every healthy part, at last accumulate, and settle upon a diseased spot. Every breach of this law, therefore, inflicts direct and positive injustice, not only upon the children employed, but upon all the industrious and honest communities in which they are employed; because its effect will be to fill those communities with paupers and criminals, or, at least, with a class of persons, who, without being absolute, technical paupers, draw their subsistence in a thousand indirect ways from the neighborhood where they reside; and, without being absolute criminals in the eye of the law, still commit a thousand injurious, predatory acts, more harassing and annoying to the peace and security of a village than many classes of positive crimes.

While water-power only is used for manufacturing purposes, a natural limit is affixed, in every place, to the extension of manufactories. The power being all taken up in any place, the further investment of capital, and the employment of an increased number of operatives, must cease. While we restrict ourselves to the propulsion of machinery by water, therefore, it is impossible that we should have such an extensive manufacturing district as, for instance, that of Manchester in England, because we have no streams of sufficient magnitude for the purpose. But Massachusetts is already the greatest manufacturing State in the Union. Her best sites are all taken up; and yet her disposition to manufacture appears not to be checked. Under such circumstances, it seems not improbable that steam-power will be resorted to. Indeed, this is already done to some extent. Should such improvements be made in the use of steam, or such new markets be opened for the sale of manufactured products, that capitalists, by selecting sites where the expense of transportation, both of the raw material and of the

finished article, may be so reduced as, on the whole, to make it profitable to manufacture by steam, then that agency will be forthwith employed; and, if steam is employed, there is no assignable limit to the amount of a manufacturing population that may be gathered into a single manufacturing district. If, therefore, we would not have, in any subsequent time, a population like that of the immense city of Manchester, where great numbers of the laboring population live in the filthiest streets, and mostly in houses which are framed back to back, so that, in no case, is there any yard behind them, but all ingress and egress, for all purposes, is between the front side of the house and the public street,—if we would not have such a population, we must not only have preventive laws, but we must see that no cupidity, no contempt of the public welfare for the sake of private gain, is allowed openly to violate or clandestinely to evade them. It would, indeed, be most lamentable and self-contradictory, if, with all our institutions devised and prepared on the hypothesis of common intelligence and virtue, we should rear a class of children to be set apart, and, as it were, dedicated to ignorance and vice.

After presenting to the Board one further consideration, I will leave this subject. It is obvious that children of ten, twelve, or fourteen years of age may be steadily worked in our manufactories, without any schooling, and that this cruel deprivation may be persevered in for six, eight, or ten years, and yet, during all this period, no very alarming outbreak shall occur to rouse the public mind from its guilty slumber. The children are in their years of minority, and they have no control over their own time or their own actions. The bell is to them what the water-wheel and the main shaft are to the machinery which they superintend. The wheel revolves, and the machinery must go; the bell rings, and the children must assemble. In their hours of work, they are under the police of the establishment: at other times, they are under the police of the neighborhood. Hence this state of things



may continue for years, and the peace of the neighborhood remain undisturbed, except, perhaps, by a few nocturnal or sabbath-day depredations. The ordinary movements of society may go on without any shocks or collisions; as, in the human system, a disease may work at the vitals, and gain a fatal ascendancy there, before it manifests itself on the surface. But the punishment for such an offence will not be remitted because its infliction is postponed. The retribution, indeed, is not postponed, it only awaits the full completion of the offence; for this is a crime of such magnitude, that it requires years for the criminal to perpetrate it in, and to finish it off thoroughly in all its parts. But when the children pass from the condition of restraint to that of freedom, from years of enforced but impatient servitude to that independence for which they have secretly pined, and to which they have looked forward, not merely as the period of emancipation, but of long-delayed indulgence; when they become strong in the passions and propensities that grow up spontaneously, but are weak in the moral powers that control them, and blind in the intellect which foresees their tendencies; when, according to the course of our political institutions, they go, by one bound, from the political nothingness of a child to the political sovereignty of a man, — then, for that people who so cruelly neglected and injured them, there will assuredly come a day of retribution. It scarcely needs to be added, on the other hand, that if the wants of the spiritual nature of a child, in the successive stages of its growth, are duly supplied, then a regularity in manual employment is converted from a servitude into a useful habit of diligence, and the child grows up in a daily perception of the wonder-working power of industry, and in the daily realization of the trophies of victorious labor. A majority of the most useful men who have ever lived were formed under the happy necessity of mingling bodily with mental exertion.

But by far the most important subject respecting which I have sought for information during the year remains to be

noticed. While we are in little danger of over-estimating the value of Common Schools, yet we shall err egregiously if we regard them as ends, and not as means. A forgetfulness of this distinction would send the mass of our children of both sexes into the world scantily provided either with the ability or the disposition to perform even the most ordinary duties of life. Common Schools derive their value from the fact that they are an instrument more extensively applicable to the whole mass of the children than any other instrument ever yet devised. They are an instrument by which the good men in society can send redeeming influences to those children who suffer under the calamity of vicious parentage and evil domestic associations. The world is full of lamentable proofs that the institution of the family may exist for an indefinite number of generations without mitigating the horrors of barbarism. But the institution of Common Schools is the offspring of an advanced state of civilization, and is incapable of co-existing with barbarian life, because, should barbarism prevail, it would destroy the schools; should the schools prevail, they would destroy barbarism. They are the only civil institution capable of extending its beneficent arms to embrace and to cultivate in all parts of its nature every child that comes into the world. Nor can it be forgotten that there is no other instrumentality which has done or can do so much to inspire that universal reverence for knowledge which incites to its acquisition. Still, these schools are means, and not ends. They confer instruments for the acquisition of an object, but they are not the object itself. As they now are, or, indeed, are ever likely to become, our young men and young women will be most insufficiently prepared to meet the various demands which life will make upon them, if they possess nothing but what these schools bestow.

*Libraries.* — After the rising generation have acquired habits of intelligent reading in our schools, *what shall they read?*

for, with no books to read, the power of reading will be useless; and, with bad books to read, the consequences will be as much worse than ignorance as wisdom is better. What books, then, are there accessible to the great mass of the children in the State, adapted to their moral and intellectual wants, and fitted to nourish their minds with the elements of uprightness and wisdom?

Let any person go into one of our country towns or districts of average size, consisting, as most of them do, of an agricultural population, interspersed with mechanics, and here and there a few manufacturers, and inquire from house to house what books are possessed, and he will probably find the Scriptures and a few school-books in almost every family. These are protected by law, even in the hands of an insolvent; so that the poor are as secure in their possession as the rich. In the houses of professional men, — the minister, the lawyer, the physician, — he would find small professional libraries, intermixed with some miscellaneous works not of a professional character; in the houses of religious persons, a few religious books of this or that class, according to the faith of the owner; in the houses of the more wealthy, where wealth is fortunately combined with intelligence and good taste, some really useful and instructive books; but where the wealth is unfortunately united with a love of display, or with feeble powers of thought, he would find a few elegantly-bound annuals, and novels of a recent emission. What he would find in other houses — and these the majority — would be few, and of a most miscellaneous character; books which had found their way thither rather by chance than by design, and ranging in their character between very good and very bad. Rarely, in such a town as I have supposed, will a book be found which treats of the nature, object, and abuses of different kinds of governments, and of the basis and constitution and fabric of our own; or one on economical or statistical science; or a treatise on general ethics and the philosophy of the human mind; or popular or intelligible expla-

nations of the applications of science to agriculture and the useful arts, or the processes by which the latter are made so eminently serviceable to man. Rarely will any book be found partaking of the character of an encyclopædia, by a reference to which, thousands of interesting questions, as they daily arise, might be solved, and great accessions to the stock of valuable knowledge be imperceptibly made; quite as rarely will any books containing the lives of eminent British or American statesmen be found, or books treating of our ante-Revolutionary history; and, most rarely of all, will any book be found on education, — education at home, physical, intellectual, and those rudiments of a moral and religious education in which all agree, — the most important subject that can possibly be named to parent, patriot, philanthropist, or Christian. And in the almost total absence of books adapted to instruct parents how to educate their children, so there are quite as few which are adapted to the capacities of the children themselves, and might serve, in some secondary degree, to supply the place of the former. Some exceptions would, of course, be expected where so many particulars are grouped under so few heads; but from all I have been able to learn, after improving every opportunity for inquiry and correspondence, I am led to believe, that, as it regards the *private* ownership of books, the above may be taken as a fair medium for the State. In small towns, almost wholly rural in their occupation, the books, though fewer, may generally be better; while in cities and large towns, though more numerous, yet a larger proportion of them is worse. Whatever means exist, then, either for inspiring or for gratifying a love of reading in the great mass of the rising generation, are mainly to be found, if found at all, in public libraries.

As the tastes and habits of the future men and women, in regard to reading, will be only an enlargement and expansion of the tastes and habits of the present children, it seemed to me one of the most desirable of all facts, to learn, as far as practicable, under what general influences those tastes and

habits are now daily forming. For who can think, without emotion, and who can remain inactive under the conviction, that every day which now passes is, by the immutable law of cause and effect, predestinating the condition of the community twenty, thirty, or forty years hence; that the web of their character and fortunes is now going through the loom, to come out of it, at that time, of worthy or of worthless quality, beautified with colors and shapes of excellence, or deformed by hideousness, just according to the kind of the woof which we are daily weaving into its texture? Every book which a child reads with intelligence is like a cast of the weaver's shuttle, adding another thread to the indestructible web of existence.

In the general want of private libraries, therefore, I have endeavored to learn what number of public libraries exist; how many volumes they contain, and what are their general character, scope, and tendency; how many persons have access to them, or, which is the most material point, how many persons do *not* have access to them; and, finally, how many of the books are adapted to prepare children to be free citizens and men, fathers and mothers, even in the most limited signification of those vastly comprehensive words. It seemed to me, therefore, that nothing could have greater interest or significance than an inventory of the means of knowledge, and the encouragements to self-education, possessed by the present and the rising generation.

Simultaneously with this inquiry I have pursued a collateral one, not so closely, although closely, connected with the main object. A class of institutions has lately sprung up in this State, universally known by the name of Lyceums, or Mechanics' Institutes, before some of which courses of Popular Lectures, on literary or scientific subjects, are annually delivered, while others possess libraries and reading-rooms, and in a very few cases both these objects are combined. These institutions have the same general purpose in view as public libraries, viz. that of diffusing instructive and enter-



taining knowledge, and of exciting a curiosity to acquire it; though they are greatly inferior to libraries in point of efficiency. As the proportion of young persons who attend these lectures and frequent these reading-rooms, compared with the whole number of attendants, is much greater than the proportion they bear to the whole people, the institutions may justly be regarded as one of the means now in operation for enlightning the youth of the State. At any rate, an inventory of the means of general intelligence which did not include these institutions would justly be regarded as incomplete.

For the purpose of obtaining authentic information on the above-mentioned subjects, I addressed to school committees and other intelligent men residing, respectively, in every town in the Commonwealth, a few inquiries, by which I ascertained that, omitting the ten Circulating Libraries, containing about twenty-eight thousand volumes, it appears that the aggregate of volumes in the public libraries of all kinds in the State is about three hundred thousand. This is also exclusive of the Sabbath-school Libraries, which will be adverted to hereafter. To these three hundred thousand volumes but little more than one hundred thousand persons, or one-seventh part of the population of the State, have any right of access, while more than six hundred thousand have no right therein.

Of the towns heard from, there are one hundred (almost one third of the whole number in the State) which have neither a town, social, nor district school library therein. What strikes us with amazement, in looking at these facts, is the inequality with which the means of knowledge are spread over the surface of the State; a few deep, capacious reservoirs, surrounded by broad wastes. It has long been a common remark that many persons read too much; but here we have proof how many thousands read too little. For the poor man and the laboring man the art of printing seems hardly yet to have been discovered.

The next question respects the character of the books composing the libraries, and their adaptation to the capacities and mental condition of children and youth. In regard to this point there is, as might be expected, but little diversity of statement. Almost all the answers concur in the opinion that the contents of the libraries are not adapted to the intellectual and moral wants of the young; an opinion which a reference to the titles in the catalogues will fully sustain. With very few exceptions the books were written for adults, for persons of some maturity of mind, and possessed already of a considerable fund of information; and, therefore, they could not be adapted to children, except through mistake. Of course, in the whole collectively considered there is every kind of books; but probably no other kind, which can be deemed of a useful character, occupies so much space upon the shelves of the libraries as the historical class. Some of the various histories of Greece and Rome; the History of Modern Europe, by Russell; of England, by Hume and his successors; Robertson's Charles V.; Mavor's Universal History; the numerous histories of Napoleon, and similar works, constitute the staple of many libraries. And how little do these books contain which is suitable for children! How little do they record but the destruction of human life, and the activity of those misguided energies of men which have hitherto almost baffled the beneficent intentions of Nature for human happiness! Descriptions of battles, sackings of cities, and the captivity of nations, follow each other with the quickest movement, and in an endless succession. Almost the only glimpses which we catch of the education of youth present them as engaged in martial sports, and in mimic feats of arms, preparatory to the grand tragedies of battle; exercises and exhibitions, which, both in the performer and the spectator, cultivate all the dissocial emotions, and turn the whole current of the mental forces into the channel of destructiveness. The reader sees inventive genius, not employed in perfecting the useful arts, but exhausting itself in

the manufacture of implements of war; he sees rulers and legislators, not engaged in devising comprehensive plans for universal welfare, but in levying and equipping armies and navies, and extorting taxes to maintain them; thus dividing the whole mass of the people into the two classes of slaves and soldiers, enforcing the degradation and servility of tame animals upon the former, and cultivating the ferocity and bloodthirstiness of wild animals in the latter. The highest honors are conferred upon men in whose rolls of slaughter the most thousands of victims are numbered; and seldom does woman emerge from her obscurity, indeed, hardly should we know that she existed, but for her appearance to grace the triumphs of the conqueror. What a series of facts would be indicated by an examination of all the treaties of peace which history records! they would appear like a grand index to universal plunder. The inference which children would legitimately draw from reading like this would be, that the tribes and nations of men had been created only for mutual slaughter, and that they deserved the homage of posterity for the terrible fidelity with which their mission had been fulfilled. Rarely do these records administer any antidote against the inhumanity of the spirit they instil. In the immature minds of children, unaccustomed to consider events under the relation of cause and effect, they excite the conception of magnificent palaces or temples for bloody conquerors to dwell in, or in which to offer profane worship for inhuman triumphs, without a suggestion of the bondage and debasement of the myriads of slaves, who, through lives of privation and torture, were compelled to erect them; they present an exciting picture of long trains of plundered wealth, going to enrich some city or hero, without an intimation, that, by industry and the arts of peace, the same wealth could have been earned more cheaply than it was robbed; they exhibit the triumphal return of warriors, to be crowned with honors worthy of a god, while they take the mind wholly away from the carnage of the battle-field, from desolated

provinces and a mourning people. In all this, it is true, there are many examples of the partial and limited virtue of patriotism, but few only of the complete virtue of philanthropy. The courage held up for admiration is generally of that animal nature which rushes into danger to inflict injury upon another; but not of that divine quality which braves peril for the sake of bestowing good, — attributes, than which there are scarcely any two in the souls of men more different, though the baseness of the former is so often mistaken for the nobleness of the latter. Indeed, if the past history of our race is to be much read by children, it should be rewritten; and while it records those events which have contravened all the principles of social policy, and violated all the laws of morality and religion, there should, at least, be some recognition of the great truth, that among nations, as among individuals, the highest welfare of all can only be effected by securing the individual welfare of each: there should be some parallel drawn between the *historical* and the *natural* relations of the race; so that the tender and immature mind of the youthful reader may have some opportunity of comparing the right with the wrong, and some option of admiring and emulating the former instead of the latter. As much of history now stands, the examples of right and wrong, whose nativity and residence are on opposite sides of the moral universe, are not merely brought and shuffled together, so as to make it difficult to distinguish between them, but the latter are made to occupy almost the whole field of vision; while the existence of the former is scarcely noticed. It is as though children should be taken to behold, from afar, the light of a city on fire, and directed to admire the splendor of the conflagration, without a thought of the tumult and terror and death reigning beneath it.

Another very considerable portion of these libraries, especially where they have been recently formed or replenished, consists of novels, and all that class of books which is comprehended under the familiar designations of “fictions,”

"light reading," "trashy works," "ephemeral," or "bubble literature," &c. This kind of books has increased immeasurably within the last twenty years. It has insinuated itself into public libraries, and found the readiest welcome with people who are not dependent upon libraries for the books they peruse. Aside from newspapers, I am satisfied that the major part of the *unprofessional* reading of the community is of the class of books above designated. Amusement is the object, — mere *amusement*, as contradistinguished from instruction in the practical concerns of life; as contradistinguished from those intellectual and moral impulses, which turn the mind, both while reading and after the book is closed, to observation and comparison and reflection upon the great realities of existence.

That reading merely for amusement has its fit occasions and legitimate office, none will deny. The difficulty of the practical problem consists in adhering to that line of reasonable indulgence, which lies between mental dissipation on the one hand, and a denial of all relaxation on the other. Life is too full of solemn duties to be regarded as a long play-day; while incessant toil lessens the ability for useful labor. In feeble health, or after sickness, or severe bodily or mental labor, an amusing, captivating, enlivening book, which levies no tax upon the powers of thought for the pleasure it gives, is a delightful resource. It is medicinal to the sick, and recuperative to the wearied mind. Especially is this the case where a part only of the faculties have been intensely exerted. Then, to stimulate those which have lain inactive brings the quickest relief to those which have been laboring. It is not repose to them, merely; but repose, as it were, tranquillized by music. But the difference is altogether incalculable and immense between reading such books as an amusement only, and reading them as restorers from fatigue or as soothers in distress; between indulging in them as a relaxation or change from deep mental engrossment, and making their perusal a common employment or business. One ener-



vates, the other strengthens and restores; one disables from the performance of duty, the other is one of the readiest preparations for a return to it. In reading merely for amusement, the mind is passive, acquiescent, recipient merely. The subjects treated are not such as task its powers of thought. It has no occasion to bring forth and re-examine its own possessions; but it is wafted unresistingly along, through whatever regions the author chooses to bear it. It is this passiveness, this surrendering of the mind, that constitutes the pernicious influence of reading for amusement, when carried to excess; because a series, a reiteration, of efforts is just as indispensable, in order to strengthen any faculty of the intellect, as a series of muscular exercises is to strengthen any limb of the body: and, in reading for amusement, these efforts are not made. Even when we read the most instructive books, and transfer to our own minds the knowledge they contain, the work is but half done. Most of their value consists in the occasions they furnish to the reader to exert all his own vigor upon the subject, and, through the law of mental association, to bring all his own faculties to act upon it. A stream of thought from his own mind should mingle with the stream that comes from the book. Such reading creates ability, while it communicates knowledge. The greatest accumulation of facts, until the comparing and the foreseeing faculties have acted upon them, is as useless as a telescope or a watch would be in the hands of a savage. Single ideas may be transferred from an author to a reader; but habits of thinking are intransferable: they must be formed within the reader's own mind, if they are ever to exist there. Actual observation, within its field, is better than reading; but the advantage of reading consists in its presenting a field almost infinitely larger and richer than any actual observation can ever do: yet if the reader does not take up the materials presented, and examine them one by one, and learn their qualities and relations, he will not be able to work them into any productions of his own; he will be like a savage who

has passed through the length of a civilized country, and just looked at its machinery, its ships and houses, who, when he returns home, will not be able to make a better tool, or build a better canoe, or construct a better cabin, than before. It is his own hand-work, on the materials of his art, which, after thousands of trials and experiments, at last turns the rude apprentice into such an accomplished artisan, that his hand instantaneously obeys his will, and, in executing the most ingenious works, he loses the consciousness of volition; and so it is by energetic, long-continued mental application to the elements of thought, that the crude and meagre conceptions of a child are refined and expanded and multiplied into the sound judgment and good sense of a man of practical wisdom. Something, without doubt, is referable to the endowments of Nature; but with the mass of men much more is attributable to that richest of all Nature's endowments, the disposition to self-culture through patient, long-sustained effort. No man, therefore, who has not made these efforts times innumerable, and profited in each succeeding case by the error or imperfection of the preceding, has any more right to expect the possession of wisdom, discretion, foresight, than the novice in architecture or in sculpture has to expect that, in his first attempt, he shall be able to equal the Church of St. Peter's, or chisel a perfect statue of Apollo. Now the bane of making amusement the sole object of one's reading, and the secret of its influence in weakening the mind, consist in its superseding or discarding all attendant exertion on the part of the reader. Without this exertion, the power of clear, orderly, coherent thought, the power of seeing whether means have been adapted to ends, becomes inactive, and at length withers away like a palsied limb; while, at the same time, — the attention being hurried over a variety of objects, between which Nature has established no relations, — a sort of volatility or giddiness is inflicted upon the mind, so that the general result upon the whole faculties is that of weakness and faintness combined.

What gives additional importance to this subject is the fact, that by far the most extensive portion of this reading for amusement consists of the perusal of fictitious works. The number of books and articles, which, under the names of romances, novels, tales in verse or prose, — from the elaborate work of three volumes to the hasty production of three chapters or three pages, — is so wide-spread and ever-renewing, that any computation of them transcends the power of the human faculties. They gush from the printing-press. Their authors are a nation. When speaking of the reading public, we must be understood with reference to the subject-matter of the reading. In regard to scientific works on government, political economy, morals, philosophy, the reading public is very small. Hardly one in fifty, amongst adults, belongs to it. For works of biography, travels, history, it is considerably larger. But in reference to fictitious works, it is large and astonishingly active. It requires so little acquaintance with our language, and so little knowledge of sublunary things and their relations, to understand them; and the inconvenience of failing to understand a word, a sentence, or a page, is so trivial; so exactly do they meet the case of minds that are ignorant, indolent, and a little flighty, that they are welcomed by vast numbers. Other books are read slowly, commenced, laid aside, resumed, and perused in intervals of leisure. These are run through with almost incredible velocity. Take a work on morals, of the same size with a novel; the reading of the former will occupy a month, the latter will be despatched without intervening sleep. Of works unfolding to us the structure of our own bodies, and the means of preserving health, and of the constitution of our own minds, and the infinite diversity of the spiritual paths, which the mind can traverse, each bringing after it, its own peculiar consequences; of works laying open the complicated relations of society, illustrative of the general duties belonging to all, and of the special duties arising from special positions; of works making us acquainted with the beneficent laws and properties of Nature, and their adaptations to supply



our needs and enhance our welfare, — of works of these descriptions, editions of a few hundred copies only are printed, and then the types are distributed, in despair of any further demand; while of fictitious works, thousands of copies are thrown off at first, and they are stereotyped in confidence that the insatiable public will call for new supplies. It was but a few years after the publication of Sir Walter Scott's poems and novels, that fifty thousand copies of many of them had been sold in Great Britain alone. Under the stimulus which he applied to the public imagination, the practice of novel-reading has grown to such extent, that his imitators and copyists have overspread a still wider field, and covered it to a greater depth. In this country, the reading of novels has been still more epidemic, because, in most parts of it, so great a portion of the people can read, and because, owing to the extensiveness of the demand, they have been afforded so cheaply, that the price of a perusal has often been less than the value of the light by which they were read.

To give some idea of the difference in the sales of different kinds of works, it may be stated, that of some of Bulwer's and Marryatt's novels, from ten to fifteen thousand copies have been sold in this country; while of that highly valuable and instructive work, Sparks's "American Biography," less than two thousand copies, on an average, have been sold; and of Prescott's "Ferdinand and Isabella," only about thirty-six hundred. The latter is considered a remarkably large sale, and is owing, in no inconsiderable degree, to the superior manner in which that interesting history was written.

No discerning person who has arrived at middle age, and has been at all conversant with society, can have failed to remark the effect upon mind and character of reading frivolous books, when pursued as a regular mental employment, and not as an occasional recreation; the lowered tone of the faculties, the irregular sallies of feeling, the want of a power of continuous thought on the same subject, and the imperfect views taken of all practical questions, — an imperfection compounded

by including things not belonging to the subject, and by omitting things which do. Any such person will be able to give his attestation to the fact, and be willing to advance it into an axiom, that *light reading makes light minds*.

So far as it respects fictitious writings, the explanation of their weakening and dispersive influence is palpable to the feeblest comprehension. All men must recognize the wide distinction between *intellect* and *feeling*, between *ideas* and *emotions*. These two classes of mental operations are inherently distinct from each other in their nature; they are called into activity by different classes of objects; they are cultivated by different processes; and as one or the other predominates in the mental constitution, widely different results follow both in conduct and character. All sciences are the offspring of the intellect. On the other hand, there cannot be poetry or eloquence without emotion. From the intellect come order, demonstration, invention, discovery; from the feelings, enthusiasm, pathos, and sublime sentiments in morals and religion. The attainments of the greatest intellect are gathered with comparative slowness, but each addition is a permanent one. The process resembles that by which material structures are reared, which are laboriously built up, brick by brick, or stone by stone, but, when once erected, are steadfast and enduring. But the feelings, on the other hand, are like the unstable elements of the air or ocean, which are suddenly roused from a state of tranquillity into vehement commotion, and as suddenly subside into repose. When rhetoricians endeavor to excite more vivid conceptions of truth by means of sensible images, they liken the productions of the intellect to the solidity and stern repose of time-defying pyramid or temple; but they find symbols for the feelings and passions of men in the atmosphere, which obeys the slightest impulse, and is ready to start into whirlwinds or tempest at once. To add to the stock of practical knowledge, and to increase intellectual ability, requires voluntary and long-sustained effort; but feelings and impulses are often spontaneous, and always susceptible of being roused into action by

a mere glance of the eye, or the sound of a voice To become master of an exact, coherent, full set, or complement of ideas, on any important subject, demands fixed attention, patience, study; but emotions or passions flash up suddenly, and while they blaze they are consumed. In the mechanical and useful arts, for instance, a knowledge of the structure and quality of materials, of the weight and motive power of fluids, of the laws of gravitation, and their action upon bodies in a state of motion or rest, is acquired by the engineer, the artisan, the machinist, — not by sudden intuition, but by months and years of steady application. Arithmetic, or the science of numbers; geometry, or the science of quantities; astronomy, and the uses of astronomical knowledge in navigation, must all have been profoundly studied, — the almost innumerable ideas which form these vast sciences must have been discovered and brought together, one by one, — before any mariner could leave a port on this side of the globe, and strike, without failure, the smallest town or river on the opposite side of it. And the same principle is no less true in regard to jurisprudence, to legislation, and to all parts of social economy, so far as they are worthy to be called sciences. But that part of the train of our mental operations which we call the emotions or affections, those powers of our spiritual constitution denominated the propensities and sentiments, which give birth to appetite, hope, fear, grief, love, shame, pride, at the very first, produce a feeling, which is perfect or complete of its kind. An infant cannot reason, but may experience as perfect an emotion of fear as an adult. Mankind, for thousands of years, have been advancing in the attainments of intellect; but the fathers of the race had feelings as electric and impetuous as any of their latest descendants. In every intellectual department, therefore, there must be accurate observation in collecting the elementary ideas, — these ideas must be compared, arranged, methodized, in the mind, — each faculty, which has cognizance of the subject, taking them up individually, and, as it were, handling, assorting, measuring, weighing them, until each one is marked at its

true value, and arranged in its right place, so that they may stand ready to be reproduced, and to be embodied in any outward fabric or institution, in any work of legislation or philosophy, which their possessor may afterwards wish to construct. Such intellectual processes must have been performed by every man who has ever acquired eminence in the practical business of life, or who has ever made any great discovery in the arts or sciences, except, perhaps, in a very few cases, where discovery has been the result of happy accident. It is this perseverance in studying into the nature of things, in unfolding their complicated tissues, discerning their minutest relations, penetrating to their centres, that has made such men as Lord Bacon, Sir Isaac Newton, Dr. Franklin, Watt, Fulton, Sir Humphry Davy, and Dr. Bowditch, — men, the light of whose minds is now shed over all parts of the civilized world as diffusively and universally as the light of the sun, and as enduring as that light. And so it is in all the other departments of life, whether higher or humbler; not more in the case of the diplomatist, who is appointed an ambassador to manage a difficult negotiation at a foreign court, than in that of the agent who is chosen by a town, because of his good sense and thorough knowledge of affairs, to conduct a municipal controversy. It is to such habits of thought and reflection upon the actual relations of things as they exist, and as God has constituted them, that we are indebted for the men who know how to perform each day the duties of each day, and, in any station, the duties of that station; men, who, because of their clear-sightedness and wisdom, are nominated as arbitrators or umpires by contending parties, or whose appearance in the jury-box is hailed by the counsellors and suitors of the court; men whose work has not to be done over again, and whose books or reports do not need *errata* as large as themselves. But the feelings or emotions, so far from being dependent on these intellectual habits for their vividness and energy, are even more vivid and energetic when freed from control and direction. The intellect hems in the feelings by boundaries of probability and natural-

ness. It opposes barriers of actual and scientific truth to their devious wanderings and flights. It shows what things can be, and what things cannot be, and thus arrests the imagination when it would otherwise soar or plunge into the impossible and the preternatural. The savage, with his uncultivated intellect, has fields for the roamings of fancy, which can have no existence to the philosopher; just as an idolater has an immensity for the creations of his superstition, which to the enlightened Christian is a nonentity.

Now, it is the feelings, and not the intellect, — the excitable or spontaneously-active powers of the mind, and not its steady, day-laboring faculties, — which the great body of fictitious works appeals to and exercises. Were the whole mass of these works analyzed, and reduced to its component elements, nineteen parts in every twenty would be found addressed to the emotions and feelings, and not to the reason and judgment. Their main staple and texture are a description of the passions of love, jealousy, hope, fear, remorse, revenge, rapture, despair, — the whole constituting a dark ground of guilt and misery, occasionally illumined by a crossing beam of ecstatic joy or almost superhuman virtue. But the trials and temptations described are rarely such as any human being will fall into; and the virtues celebrated are such as few will ever have an opportunity to achieve. Hence sympathy and aversion, desire and apprehension, are kept at the highest tension; but it is upon incidents and scenes outside of actual life, not in this world, and often not capable of being transferred to it. In the mean time, the understanding sleeps; the intellect is laid aside. Those faculties by which we comprehend our position in life and our relations to society, — by which we discover what our duty is, and the wisest way to perform it, — have nothing to do. The mind surrenders itself to the interest and excitement of the story, while the powers by which we discern tendencies and balance probabilities are discarded; nay, those sober thoughts are unwelcome intruders which come to break the delusion, and to repress an insane exhilaration of the feel-

ings, — until, at last, the diseased and infatuated mind echoes that pagan saying, so treasonable to truth, that it would prefer to go wrong with one guide rather than right with another, — as though, in a universe which an all-wise Being has formed, any thing could be as well as to go right. In the reports of some of the French hospitals for lunatics, *the reading of romances* is set down as one of the standing causes of insanity.

It is the perusal of this class of works as a regular or principal mental employment, of which I am speaking; and it is easy for any one acquainted with the laws of the human mind, and with the causes which foster or stint its growth, to predict the effect of such reading both upon the will and the capacity to perform the every-day duties and charities of life. Could all temporal duties be written down in a catalogue, we should find that private, domestic, in-door duties would constitute vastly the greatest number. The social duties, growing out of relationship, friendship, and neighborhood, would make up the next largest and most important class; for, while all others only call upon us occasionally, the demands of these are perpetual. Now, for the appropriate and punctual discharge of these numerous and ever-recurring duties, a knowledge of all the scenes and incidents, the loves and hates, the despairs and raptures, contained in all the fictions ever written, is about as fit a preparation, as a knowledge of all the “castles in the air,” ever built by visionaries and dreamers, would be to the father of a houseless family, who wished to erect a dwelling for their shelter, but was wholly ignorant both of the materials and the processes necessary for the work. And the reason is, that, in the region of fiction, the imagination can have every thing in its own way; it can arrange the course of events as it pleases, and still bring out the desired results. But in actual life, where the law of cause and effect pervades all, links all, determines all, the appropriate consequences of good or evil follow from their antecedents with inevitable certainty. The premises of sound or false judgments, of right or wrong actions, being given, the

course of Nature and Providence predestines the conclusions of happiness or misery, from which we cannot escape. Hence the mind — which, in the world of imagination, has been relieved from all responsibility for consequences, being rigorously held to abide by consequences whenever it descends to sublunary affairs, and being ignorant of the connection between causes and effects — finds all its judgments turned into folly, and all its acts terminating in disaster or ruin.

Nor are the *moral* effects of this kind of reading, when systematically pursued, less pernicious than the intellectual; for it will be found that those who squander their sympathies most prodigally over distresses that were never felt are the firmest stoics over calamities actually suffered. The inveterate novel-reader will accompany heroes and heroines to the ends of the earth, and in tears bewail their fancied misfortunes; while he can command the serenest equanimity over sufferings in the next street or at the next door. The continued contemplation of pain, without any accompanying effort to relieve it, forms the habit of dissociating feeling from action, and presents the moral anomaly of one who professes to feel pity, but withholds succor. In all healthy minds, judicious action follows virtuous impulse. Nor do the splendid heroes of romance ever earn their greatness and their honors by a youth of study and toil, by contemning the seductions of inglorious ease; and thus they never hold out to the young mind the example of industry and perseverance and self-denial as the indispensable prerequisites to greatness. Far more baneful are the effects, when characters whose lives are immersed in secret profligacy are varnished to the eye of the world by wealth and elegance; or when audacious criminals are endowed with such shining attractions of wit, talent, and address, as cause the sympathy of the reader to outweigh his abhorrence.

But if it is unfortunate that so many people should addict themselves to the reading of fiction, because their minds are immature and unbalanced, and have no touchstone whereby

they can distinguish between what is extravagant, marvellous, and supernatural, and what, from its accordance to the standard of nature, is simple, instructive, and elevating; it is doubly unfortunate that so many excellent young persons should be misled into the same practice, either from a laudable desire to maintain some acquaintance with what is called the literary world, and to furnish themselves with materials for conversation, or from a vague notion that such reading alone will give a polish to the mind, and adorn it with the graces of elegance and refinement. In endeavoring to elucidate the manner in which this indulgence entails weakness upon the understanding, and unfits it for a wise, steady, beneficent course of life, in a world so abounding as this is in solemn realities and obligations, I would most sedulously refrain from uttering a word in disparagement of a proportionate and measured cultivation of what are called polite literature and the polite arts in all their branches. While we have sentiments and affections, as well as thoughts and ideas; while, in the very account of the creation of the world, it is said that some things were made to be *pleasant to the sight*, and others good for sustenance; and while our spiritual natures are endowed with susceptibilities to enjoy the former, as well as with capacities to profit by the latter,—any measures for the elevation of the common mind, which do not recognize the existence and provide for the cultivation of the first class of powers, as well as for the second, would form a community of men, wholly uncouth and rugged in their strength, and almost unamiable, however perfect might be their rectitude. The mind of every man is instinct with capacities above the demands of the workshop or the field, — capacities which are susceptible of pure enjoyments from music and art, and all the embellishments of civilized life, and whose indulgence would lighten the burden of daily toil. All have susceptibilities of feeling too subtile and evanescent to find any medium of utterance, except in the language of poetry and art, and too refined to be called into being, but by the creations



of genius. The culture of these sensibilities makes almost as important a distinction between savage and civilized man, as the training of the intellect; and without such cultivation, though the form of humanity may remain, it will be disrobed of many of its choicest beauties. Still, in a world, where, by the ordinations of Providence, utility outranks elegance; where harvests to sustain life must be cultivated before gardens are planted to gratify taste; where all the fascinations of regal courts are no atonement for the neglect of a single duty, — in such a world, no gentility or gracefulness of mind or manners, however exquisite and fascinating, is any substitute for practical wisdom and benevolence. Without copious resources of useful knowledge in our young men and young women; without available, applicable judgment and discretion, adequate to the common occasions and ready for the emergencies of life, — the ability to quote poetic sentiments, and expatiate on passages of fine writing, or a connoisseurship in art, is but mockery. Hence it is to be regretted that so many excellent young persons, emulous of self-improvement, should commit the error of supposing that an acquaintance with the institutions of society, with the real wants and conditions of their fellow-men, and with the means of relieving them, can be profitably exchanged for a knowledge of the entire universe of fiction; or that it is wise, in their hours of study, to neglect the wonderful works of the Creator, in order to become familiar with the fables of men. Intellect must lay a foundation, and rear a superstructure, before taste can adorn it. Without solid knowledge and good sense, there is no substance into which ornament or accomplishment can be inwrought. It is impossible to polish vacuity, or give a lustre to the surface of emptiness.

One other general remark is applicable to a large portion of this class of works. Most of them were written in Great Britain for British readers. Hence they suppose and represent a state of society where wealth outranks virtue, and birth takes precedence of talent, except in extraordinary cases

of mental endowment or attainment. They describe two classes of men, which we never ought to have,—one class, whose distinction and elevation are founded on the adventitious circumstances of birth or fortune, and another class who are the ignorant, degraded dependants upon the former,—but they do not describe any class of industrious, intelligent, exemplary, just, and benevolent men, so alive to the rights of others, that under no temptation would they become lords, and so conscious of their own, that under no force would they remain slaves,—a class of men which we ought to have, and, with a proper use of the blessings Heaven has given us, we may have. Surely, such books do not contain the models according to which the youth of a Republic should be formed.

I should have felt myself wholly unwarranted in thus commenting upon the prevalence of *amusing* and *fictional*, compared with *useful* reading, and upon the pernicious consequences of indulgence in it, were it not that the children of the State are now growing up in this very condition of things, and under circumstances, too, which will lead them to commit the same error, and, of course, to suffer the same evil, except some new inducements can be found to win them from it. The number of these works, with the number of their readers, is now rapidly increasing,—not absolutely only, but relatively, and in proportion to other and useful works. The materials of which they are composed have now been so often wrought over, that moderately imitative powers are amply sufficient for recasting them in slightly modified forms: originality and invention have ceased to be necessary. The cheapness, too, of this class of works, gives them a preference, not only for circulating, but for town and social libraries. I have been surprised at finding such numbers of them in the catalogues of the latter. I have heard of but one town or social library from which they have been peremptorily excluded by an article in the constitution. The by-laws of one other library set up a certain standard for books, and empower a committee to burn all the nonconformists; that is, the noncon-

forming books. In other places, authority to dispose by sale of trivial or pernicious books is given; and this leads me to another subject in regard to the reading of the community, not less important than the preceding.

This subject is presented by the question, What do those persons read, who have not yet risen to the point of appreciating and admiring the better class of fictions and of recent literary works? A taste for the better kinds of light reading presupposes a preference, in the reader's mind, of what belongs to the spiritual over what belongs to the merely animal part of our nature, — of mental over sensual gratifications. A knowledge, too, of some of the more obvious phenomena of the material world, and of the operations of the human mind, has made many books ridiculous and contemptible, which once were consulted as oracles, and filled their readers with terror and reverential awe. The fictions of the last century, whose texture consists of events monstrous and supernatural, whose machinery is ghosts, hobgoblins, demons, and demi-gods, — written from one end to the other in defiance not merely of experience, but of possibility, and adapted to the lowest ignorance, — these, in rare instances only, have been republished. They have been driven from shelves and tables upon which the feeblest ray of the light of science has been cast. Yet, even within the last year, large editions of dream-books and fortune-tellers have been published. But there is a kind of reading in the community, wholly unknown to the publishers of fashionable novels and of the better sort of ephemeral literature. To those who have not been in the way of knowing, nor in the habit of reflecting, what kind of reading is most congenial and welcome to the least educated portion of the people, and through what channels they are supplied, the facts which have existed and still exist must be a source of alarm. Numerous itinerant booksellers are constantly on the circuit of the country, offering from door to door such books as, in the advancing knowledge and changing tastes of the times, are no longer salable at the bookstore, nor inquired for at the circulating

library. The precise extent of this traffic it is impossible to determine; yet, from all I can learn, I am satisfied it is carried on to a very considerable degree, especially in inland towns and in the purlieus of populous places. One gentleman informed me, that, in the vicinity of a manufacturing village where he lived, he had seen half a dozen of these book-peddlers in a fortnight. In communications received on the subject of established libraries, mention of similar facts has occasionally been made, although that was not one of the subjects on which information was sought. During the last autumn, I saw in a beautiful inland town the contents of a peddler's vehicle, unladen, and arranged in a stall by the side of the street. I took occasion carefully to examine the books thus exposed for sale. Amongst several hundred volumes, there were not more than two or three books which any judicious person would ever put into the hands of a child after he could read. The rest consisted of the absurdest novels of the last century, of stories of buccaneers, of pirates and murderers, of shipwrecks, of Newgate calendars, and accounts of other exciting and extraordinary trials, of different sizes and prices to meet the ability of purchasers. On a temporary counter were spread out bundles of songs, in single sheets, some patriotic, some profane, and some obscene, — to be sold for a cent apiece. Amongst the books were Volney's "Ruins" and Paine's "Age of Reason." At the time of this exposition for sale, a literary festival, occupying two days, was held in the same village; on which occasion, profound philosophical, literary, and religious discourses were delivered to intelligent and gratified audiences. The stall where the books were sold was within a stone's-throw of the church where the anniversary was celebrated. Both exercises went on together. The thought, irrepressible on the occasion, was, how much of that immense difference between those who listened with delight to the eloquence of the discourses and appreciated the instruction they gave, and those who purchased the moral venom to satisfy the cravings of a natural appetite, to which no entertainment of better things had ever been

offered, — how much of this immense difference was perfectly within the power, and therefore within the responsibility, of society. Surely such taste, and such books at once to gratify and aggravate it, are not the means wherewith the children in a free government, and of a Christian people, are to lay the ever-during foundations of conduct and character.

How few parents there are, who, in looking back to the days of their own childhood and minority, find no occasion to lament, — now when the injury is irreparable, — the want of early opportunities for laying up a store of valuable knowledge, and the loss of time, — now irrecoverable, — consequent upon that want! How many feel, daily, that their power of thinking, and especially of expressing their thoughts in speech or in writing, has, all their life long, been obstructed and deadened, from an absence of facilities for information and of incitements to study in early life. For the parents themselves, these regrets come too late. The losses belong to a class for which even repentance brings no remedy. And the question is, whether these same parents shall suffer their own children to grow up under a similar privation, to be doomed in their turn, when they become men and women, to the same melancholy retrospect and to the same unavailing regrets.

The people of this State are, and must of necessity continue to be, an *industrious* people, or they cannot subsist. Wealthy as the State is justly supposed to be, yet if all the property in it, both real and personal, were equally divided amongst all its inhabitants, it would not amount to more than four hundred dollars apiece. How soon would all this be gone, even to the very soil we tread on, without the annual replenishings of industry! Our soil furnishes nothing of spontaneous growth, and its unrelenting ruggedness can be propitiated only by the offerings of industry. Our people, therefore, as a people, cannot go abroad for information, — for that enlargement of mind and that acquaintance with affairs which comes from foreign travel, when pursued with an inquiring spirit and au

open eye. If the necessity of their condition debars them from visiting other states or countries in quest of knowledge, then knowledge must be brought to them, — to their own doors and fire-sides, — or ignorance is the only alternative, — the ignorance of childhood darkening into the deeper ignorance of manhood, with all its jealousies and its narrow-mindedness, and its superstitions, and its penury of enjoyments, — poor amid the intellectual and moral riches of the universe, blind in the splendid temple which God has builded, and famishing amid the profusions of Omnipotence. The minds, then, of our people, should travel, though their bodies remain at home ; and, for these journeyings and voyages, books are an ever-ready and costless vehicle.

With a rugged and unproductive soil, Massachusetts is also by far the most densely populated State in the Union. Hence, for the temporal and material prosperity of her people, — for their subsistence even, — they are obliged to form an alliance with the great agencies of Nature, as auxiliaries in their labor. But Nature bestows her mighty forces of wind and water and steam, only upon those who seek them through intelligence and skill. The same circumstances, therefore, which seem to have marked out this State as a place of great mechanical, manufacturing, and commercial industry, draw after them the necessity of such a wide range of knowledge, as, though always valuable, would not otherwise be so indispensable. To fit the people for prosecuting these various branches of business with success — or even to rescue them from making shipwreck of their fortunes — they must become acquainted with those mechanical laws that pervade the material world. They must become intelligent machinists, millwrights, shipwrights, engineers — not craftsmen merely, but men who understand the principles upon which their work proceeds ; so that, by the skilful preparation and adjustment of machinery, the sleepless and gigantic forces of Nature may perform their tasks. They must know the nature and action of the elements. They must know the properties of the bodies used in their respective

branches of business, and the processes by which rude materials can most cheaply be converted into polished fabrics. They must know the countries whence foreign products are imported, whither domestic products are exported, the course of trade, the laws of demand and supply, what articles depend on the permanent wants of mankind, and therefore will always be in demand, and what depend upon caprice or fashion, and therefore are certain to be discarded soon, for the very reason that they are now in vogue. Now, all these lead out, by imperceptible steps, into mechanical philosophy, the applications of science to the useful arts, civil geography, navigation, commerce, political economy, and the relations which nations bear to each other. Although an individual might learn to perform a task or execute an agency in one of these departments, empirically, that is, by a knowledge of the modes of proceeding, but in ignorance of the principles on which the process depends, yet such individuals never originate improvements or inventions. Like the Chinese, the end of a hundred years, or of a hundred generations, finds them in the spot they occupied at the beginning.

Of those engaged in agriculture, — an interest intrinsically important and elevated, — it may be said, that just in proportion as the soils they cultivate are more sterile should the minds of the cultivators be more fertile; for, in a series of years, the quantity of the harvests depends quite as much upon the knowledge and skill of the cultivator as upon the richness of the soil he tills. Take the year round, and the farmer has as many leisure hours as any class of men; and he has this advantage over many others, that his common round of occupations does not engross all his powers of thought, so that, were his mind previously supplied with a fund of facts, he might be meditating as he works, and growing wiser and richer together.

In fine, there is not, and the constitution of things has made it impossible that there should be, any occupation or employment whatever, where an extended knowledge of its principles,

or of its kindred departments, would not improve products, abridge processes, diminish cost, and impart dignity to the pursuit.

And how without books, as the grand means of intellectual cultivation, are the daughters of the State to obtain that knowledge on a thousand subjects, which is so desirable in the character of a female, as well as so essential to the discharge of the duties to which she is destined? Young men, it may be said, have a larger circle of action; they can mingle more in promiscuous society, — at least, they have a far wider range of business occupations, — all of which stimulate thought, suggest inquiry, and furnish means for improvement. But the sphere of females is domestic. Their life is comparatively secluded. The proper delicacy of the sex forbids them from appearing in the promiscuous marts of business, and even from mingling, as actors, in those less boisterous arenas, where mind is the acting agent, as well as the object to be acted upon. If, then, she is precluded from these sources of information, and these incitements to inquiry; if, by the unanimous and universal opinion of civilized nations, when she breaks away from comparative seclusion and retirement, she leaves her charms behind her; and if, at the same time, she is debarred from access to books, by what means, through what channels, is she to obtain the knowledge so indispensable for the fit discharge of maternal and domestic duties, and for rendering herself an enlightened companion for intelligent men? Without books, except in cases of extraordinary natural endowment, she will be doomed to relative ignorance and incapacity. Nor can her daughters, in their turn, escape the same fate; for their minds will be weakened by the threefold cause of transmission, inculcation, and example. Steady results follow from steady causes; under such influences, therefore, if not averted, the generations must deteriorate from the positive to the superlative in mental feebleness and imbecility.

But far above and beyond all special qualifications for special pursuits is the importance of forming to usefulness and



honor the capacities which are common to all mankind. The endowments that belong to all are of far greater consequence than the peculiarities of any. The practical farmer, the ingenious mechanic, the talented artist, the upright legislator or judge, the accomplished teacher, should be only modifications or varieties of the original *man*. The man is the trunk; occupations and professions are only different qualities of the fruit it should yield. There are more of the same things to be taught to all, and learned by all, than there are of different things to be imparted, distributively, to classes consisting of a few. The development of the common nature; the cultivation of the germs of intelligence, uprightness, benevolence, truth, that belong to all, — these are the principal, the aim, the end; while special preparations for the field or the shop, for the forum or the desk, for the land or the sea, are but incidents.

In the first place, it is requisite that every man, considered merely as a man, and without reference to station or occupation, should know something of his own bodily structure and organization, of whose marvellous workmanship it is said, that it is fearfully and wonderfully made, — *wonderfully*, because the infinite wisdom and skill, manifested in the adjustment and expansion of his frame, tend to inspire the mind with devotion and a religious awe; and *fearfully*, because its exquisite mechanism is so constantly exposed to peril and destruction from all the objects and elements around him, that precaution or fear is the hourly condition of his existence.

Did each individual know, — what, with a few suitable books, he might easily learn, — on what observances and conditions the Creator of the body has made its health and strength to depend; did he know that his corporeal frame is a general system, made up by the union of many particular systems, — the nervous, the muscular, the bony, the arterial, the venous, the pulmonary, the digestive; that all these bear certain fixed relations to each other, and to the objects and elements of the external world, — it is inconceivable how much of

disease and pain and premature death would be averted,—from how much imposition he would be saved, and how much the powers of useful labor, and the common length of life, would be increased. Even from the extension of knowledge on these subjects within the last century, the average length of life has increased one quarter; and yet it now reaches to but little more than half of threescore years and ten. How many persons, annually, are killed by the carbonic gas of burning charcoal, when, did they know of its existence, or how it is formed, they would as soon swallow arsenic as inhale it! How much property is annually destroyed by spontaneous combustion, through an ignorance of the circumstances that cause it! What a population of spectres and ghosts and apparitions has been driven from the abodes of all intelligent men, and might be annihilated with regard to all mankind, by a knowledge of the reflection and refraction of light, and of a few other simple laws of Nature! Those terrific races, that once swarmed the earth, have ceased their visits where a few of those principles of science are understood, which every child, if supplied with the means, might easily learn. How pertinaciously have the most diffusive blessings been resisted,—such as the use of lightning conductors, and vaccination,—because devout but ignorant people supposed, that to ward off death, when it came under violent forms, was an impious defiance of the will of Heaven! as though it were not the primary will of Heaven that we should use the means of self-preservation which it has graciously given us. It is not long since, that, in one of our most intelligent cities, a splendid granite church took fire; and when it was found impossible to extinguish the flames in its interior, the chief-engineer forbade the engine-men to play upon the walls, because he well knew that water thrown upon heated granite would decompose it, and he wished to save the materials; but hundreds of others, ignorant of this fact, but only knowing that the engineer belonged to a different religious denomination from the worshippers at the church, attributed the prohibition to his spite against an

opposing sect of Christians ; and, while he took the measure which alone could save the property, they supposed he was maliciously delighting himself with the sight of its destruction. In Scotland, during the last century, the introduction of mills for winnowing grain was violently opposed. The whole argument took a theological cast. It was urged, on one side, that the use of a winnowing mill was a resistance of the Divine Will, because it prevented the wind from "blowing where it listeth." But, on the other side, it was gravely answered, that to prevent the wind from "blowing where it listeth," only contravened the will of the "Prince of the power of the air," and was therefore not only lawful, but laudable. Profit and convenience coming to the support of the latter argument, it prevailed. These are specimens only of the most gross and sottish ignorance. Its less palpable forms are indefinitely more numerous, and their consequences, in the aggregate, indefinitely more disastrous. Let any one read such a work as that of Dick "On the Diffusion of Useful Knowledge," and he will be able to form some idea how intimately the private, personal happiness of a people is connected with its intelligence.

But these illustrations are endless. The real fact to be pondered is, that, without diffusing information amongst the people, we shall go on in the same way, smiling at the follies of the last generation, and furnishing anecdotes for the next. There are innumerable ways in which a knowledge of the material world would gladden the obscurest dwelling in the land, and disburden the heart of the humblest individual of fears, anxieties, and sorrows. There are innumerable ways in which an instructed and enlightened man turns the course of Nature to his profit and delight and daily comfort, which an ignorant man would no more think of than a savage would think of burning anthracite coal in the winter to warm him, and of preserving ice over summer to cool him.

All children might learn something of Natural History. This department presents an immense variety of objects, cal-

culated to develop their observing and comparing faculties, at a period of life when these faculties are more active than ever afterwards, and to store the mind with an abundance of materials for the judging and reasoning powers to act upon. To portions of this class of objects, divines and moralists are perpetually referring, in order to illustrate the power and wisdom and perfections of God ; and yet, how nearly lost are all such illustrations upon minds that know nothing of those laws of vegetable life which clothe "the lilies of the field" in a beauty beyond the regal glory of Solomon, nor of that animal mechanism that saves the "sparrow" from falling !

The biography of great and good men is one of the most efficient of all influences in forming the character of children ; for, as they are prone to imitate what they admire, it unconsciously directs, while it delights them. Let the mind be supplied with definite, exact ideas on any subject, and we all know by experience, that, when an analogous case arises, the related ideas with which we were familiar before will instantaneously spring up in the mind by the law of association. And when correct ideas present themselves spontaneously in this way, they are, to say the least, far more likely to be embodied in action, than if they had first to be laboriously sought out. Especially is this true in emergencies ; and how many of the follies and imprudences of men are first committed on emergencies, so sudden as to exclude reflection ! On such occasions, to have prototypes of moral excellence in the mind is something like having precedents or examples in the practical concerns or business of life. Although it is a great truth, that all minds have the capacity of distinguishing between right and wrong, yet life presents innumerable instances where the application of these principles is attended with serious difficulty : in such cases, mere ignorance is always the source of error, and often of ruin. And how many excellent men have lived, how many illustrious examples have been set, of which only a very few of the more favored children of this State have ever heard ! all others, therefore, being not so

much as invited to follow in the same radiant paths. Why should the examples of benevolence, of probity, of devotion to truth, be lost to so many of our children, whom they might fire with a corresponding love of excellence? Here are real examples of real men, and are, therefore, possible and imitable; and, to the unsophisticated mind of a child, there is as great a difference between real and fictitious personages as there is to a merchant between real and fictitious paper. There never was such an argument in favor of furnishing biographical and scientific truth for children, and against that mass of fictions which are given them for true stories, and not as media or illustrations merely, as the simple question, which ingenuous children so often ask, when reading or hearing a narrative, *Is it true?* It ought to be remembered, that in all the objects and operations of Nature, and in the lives of genuine men, we converse with God and with the course of his providence *at first hand*, and not with mock-shows and counterfeits and hearsays.

There is another kind of reading, which all must admit to be of the very highest importance to our citizens, and of which they are almost universally ignorant; I mean our ante-Revolutionary history. Few, even of our educated men, can claim any familiarity with it; yet there our free institutions germinated. Never, in any other place, nor at any other time, have the great principles of civil and religious liberty been so ably discussed, or been sustained by such heroic trials and sacrifices, as between the first colonization of this country and the peace of 1783. Our country's independence, the birth of a free people, — one of the greatest epochs in the history of the human race, — was the result. Every boy who is not ruined by a false course of instruction passes through a state of mind, between the ages of sixteen and twenty-one, when a study of the principles and deeds recorded in that history would give him some adequate idea what liberty and law are, what they have cost, and what they are worth.

But, when we turn from the outward and material world to

the inward and spiritual life, a wider field for improvement opens before us; for out of the invisible recesses of the mind come all the mighty changes wrought by human power. When an uninstructed person looks upon the outward form of a man, he thinks nothing of the skilfully-adjusted organs, nor of the mysterious functions of vitality, within it. The vibrating nerves, which convey sensation and volition, the contracting muscle, the flowing blood, the health and strength giving processes of nutrition, the dilating lungs, with their adaptations to each other, are all hidden from his untaught gaze. So, when an ignorant man regards the operations of the mind, he discerns only a tumultuary, conflicting tide of wishes and terrors, of pleasures and pains, of doubts and purposes, rising, contending, and subsiding, without order or law. He takes no cognizance of the different powers and faculties with which he has been endowed, of their relative supremacy, of their different spheres of action, nor of their adaptations to his temporal condition; and hence, when he obeys their impulses, it is without the approval of conscience; and when he commands them, it is without the discriminations of reason. Every child, towards the close of his minority, has time and capacity enough, could he be furnished with the means, to acquire much of the knowledge enjoined in that ancient precept, so universally celebrated and sanctioned, "Know thyself."

But, after all, those blessings of knowledge, combined with well-directed feelings, which cannot be enumerated, are infinitely more than any language can express. The greater proportion of the stream of every man's life is hidden in the silent breast, and never emerges into utterance or action. Much as any one may be in the company of the world, he is much more in the company of his own consciousness only. It is the perpetual inflowing of his secret reflections and emotions that mingles sweet or bitter waters in the stream of every man's existence. Whatever reaches the fountains of this stream, is, as far as possible, to be remembered in plans for human amelioration. Few men have battles to fight, or senates to per-

suade, or kingdoms to rule; but all have a spirit to be controlled, and to be brought into subjection to the social and divine law. The intellect forces the great problems of existence and futurity and destiny upon all; and none will question that much depends upon human means, whether a man shall go through the world and out of it, elated by delusive hopes, or tormented by causeless fears.

Among the agencies that operate to these momentous ends, books, certainly, occupy a conspicuous place. Whoever has read modern biography, with a philosophic eye to the causes of the extraordinary characters it records, must have observed the frequent references that are made to some *book*, as turning the stream of life at some critical point in its course. In one of Dr. Franklin's letters, he says, that, when a boy, he met with a book entitled "Essays to do Good," which led to such a train of thinking, as had an influence on his conduct through life. Sir Walter Scott, in his writings and letters, makes repeated and repeated mention of the fact, that he owed his power of painting past times to the books which he read when young. The notorious Stephen Burroughs, a native of a neighboring State, relates in his autobiography, that he was inflamed with military ardor by the perusal of "Guy, Earl of Warwick;" that he ran away from his father three times, — once before he was fourteen years of age, — and enlisted in a regiment of artillery. Twice he was reclaimed, but, at last, he succeeded in escaping, and in the camp, it has been sometimes said, commenced his life of ignominy. Whoever looks deeper, sees that that ignominious life commenced when he was reading a pernicious book. It would be easy to fill pages with similar facts. "When I see a house," says Dr. Franklin, "well furnished with books and newspapers" (of course he meant instructive, and not mere partisan ones), "there I see intelligent and well-informed children; but, if there are no books nor papers, the children are ignorant, if not profligate." It has been frequently remarked by observing men, that towns in which good libraries have been established show a population of intelli-

gence superior to that of towns where none has existed. In a number of towns, recent attempts to establish libraries for grown people have utterly failed. The men and women, not having acquired a taste for useful reading when children, have lost it for life. Let the same course be followed in regard to the present children, and time is not more certain to bring the day when they shall be men and women, than it is to bring the same feelings of indifference towards mental improvement. On the other hand, I have never heard of a well-selected library for children which has failed from their want of interest in it.

And in what way, except by furnishing good libraries to the people at large, can the reading of frivolous and useless books, of novels of the baser sort, and of that contaminating and pestilential class of works which is now hawked around the country, creating moral diseases, or inflaming and aggravating where it finds them, be prevented? These books no law can destroy or reach. No power of persuasion can ever induce those who have acquired a love of reading them to abandon what gives them pleasure, without some equivalent of pleasure is proffered in its stead. But a supply of good books would confer far more than an equivalent. It would prove a remedy where the disease exists, and an antidote where it threatens. Let good books be read, and the taste for reading bad ones will slough off from the minds of the young, like gangrened flesh from a healing wound. Nor will any severity of legislative enactment, nor any vigilance in the administration of the law, ever succeed in the extirpation of gaming, shows, circuses, theatres, and many low and gross forms of indulgence, without the introduction of some moral and intellectual substitutes.

For the purpose of carrying out a plan of improvement, co-extensive with the wants of the community, and with the limits of the State, no system can be devised at all comparable with the existing arrangement of school districts. Here are corporate bodies, known to the law, already organized and in ope-



ration. The schoolhouses are central points of minute subdivisions of territory, which, in the aggregate, embrace every inch of ground in the State. There are but few districts in the State which comprise more than a space of two miles square. On an average, they include less than that extent of territory. Here, then, are central points, at convenient distances, distributed with great uniformity all over the Commonwealth; each one with a little group of children—the hope and treasure of the State—dependent upon it for all the means of public instruction they are ever to enjoy. And these points, though now emitting so dim and feeble a light, may be made luminous and radiant, dispelling the darkness, and filling the land with a glory infinitely above regal splendor. Could the children, who are so widely scattered over the surface of the State, laboring, even in their tender years, upon its hills and by its water-falls,—could they assemble, and present themselves before their rulers, and be, for a moment, endued with a vision of their coming fortunes, and speak of the life of toil to which most of them have been born, of their poverty in the means of self-cultivation, or, what is worse than poverty, of their indifference to it; could they proclaim that every passing day is uttering the irreversible oracles of their fate, who could resist the appeal? And can the thought of such an appeal penetrate the heart with less electric swiftness because they cannot make it?

Were any mode to be now devised or discovered by which the soil of the State could be made to yield fourfold its present harvests, with no additional labor or expense; or by which, in some new mode of applying water or steam power, a given expenditure of time and money would return quadruple products in value or in quantity,—could there be found a dissenting voice against its immediate adoption? Yet who will venture to say that one fourth, or even one-fortieth, part of the mental and moral energies of our children is now put forth and expended in the wisest direction, or for the highest objects? Were the earth beneath us found to be a rich magazine of

mineral treasures, how speedily would the spirit of enterprise invest its capital and ply its enginery in bringing those treasures to light, and in appropriating them to their uses! Why a more contented wastefulness of moral resources than of mineral wealth? Were there wide tracts of the richest soils in the State unreclaimed, how soon would the hand of skilful husbandry enter and till them, and make them teem with luxuriant harvests! Yet, in the obscurest corners of the land, along the by-ways, and under the humblest roofs, there is buried talent, and the suppressed power of extended and god-like benevolence. Could a library containing popular, intelligible elucidations of the great subjects of art, of science, of duty, be carried home to all the children in the Commonwealth, it would be a magnet to reveal the varied elements of excellence now hidden in their souls.

The State, in its sovereign capacity, has the deepest interest in this matter. If it would spread the means of intelligence and self-culture over its entire surface, making them diffusive as sunshine, causing them to penetrate into every hamlet and dwelling, and, like the vernal sun, quickening into life the seeds of usefulness and worth, wherever the prodigal hand of Nature may have scattered them, it would call into existence an order of men who would establish a broader basis for its prosperity, and give a brighter lustre to its name,—who would improve its arts, impart wisdom to its counsels, and extend the beneficent sphere of its charities. Yet not for its own sake only should it assume this work. It is a corollary from the axioms of its constitution, that every child born within its borders shall be enlightened. In its paternal character, the government is bound, even to those who can make no requital. Sacredly is it bound to develop all the existing capacities, and to insure the utmost attainable welfare, of that vast crowd and throng of men, who, without being known, during life, beyond their neighboring hills,—without leaving any enduring name behind them after death, still, by their life-long industry, fill up, as it were, drop by drop, the mighty stream

of the country's prosperity. In the heart of this multitude dwell capacities of good, and possibilities of evil, wholly transcending the power of finite imagination to conceive. Here are an inconceivable extent and magnitude of interests, sympathies, obligations; here are all the great instincts of humanity, working out their way to a greater or less measure of good, according to the light they enjoy; and, compared with this wide and deep mass of unrecorded life, all that emerges into history and is seen of man is as nothing. To a superior being, to whom the world appears as it really is, — whose eye can see through it and round it, — the substance of its weal and woe lies here; and ought not the means of knowledge, and the incitements and the aids to virtue, to be co-extensive with this vast expanse and depth of wants and responsibilities?

Again: it is believed that no barbarous nation has ever been known to history, — amongst whom any form of government had been established, — which had not adopted specific measures to educate the heir of sovereignty for the discharge of his regal duties. And can the obligation to prepare for the responsibilities attendant upon power be less, where all the citizens, instead of one, are born to the inheritance of sovereignty? By our institutions, the political rights of the father descend to his sons in course of law. But the intellectual and moral qualifications necessary for the discreet use of those rights are intransmissible by virtue of any statute. These are personal, not hereditary; and are, therefore, to be taught anew and learned anew by each successive generation. Hence, as the work of education is never done, the means of education should never be withheld; as the former must be continually renewed, the latter must as continually be supplied.

The instruction and pleasure which the parents themselves would experience from the establishment of a good library in their respective districts are too important to be forgotten, and yet are so obvious as to need only a passing reference.

It seems to be the unanimous opinion of the teachers of all schools, whether public or private, that a School Library would

be a most valuable auxiliary in interesting children in their studies. It would inspire the young with the desire to learn, that they might prepare themselves to enjoy what they saw was prized by others. Several of the rudimental studies could be invested, to the eye of the pupil, with new interest and usefulness by its means. If the facts or sentiments contained in the reading-lessons could be illustrated or enlivened by some explanation or anecdote from the library, it would often convert a mechanical routine into a living exercise. If, when the scholars come to the name of Socrates or Luther or Howard, they could turn to a Biographical Dictionary, and find a summary of the lives and deeds of these men, and ascertain their place in chronology and in geography, it would give a sense of reality to the business of the school, while, at the same time, it would acquaint them with important facts. And so of ancient or foreign customs and manners, of memorable events, of remarkable phenomena in Nature, &c. Pupils, who, in their reading, pass by names, references, allusions, without searching, *at the time*, for the facts they imply, not only forego valuable information, which they may never afterwards acquire, but they contract a habit of being contented with ignorance. Under the influence of such a habit, the ardent desire for knowledge, which Nature kindles in the breast of children, will soon be extinguished, and they will come to resemble the irrational creation, which, without thought or emotion, passes by objects of the greatest curiosity and wonder.

Again: access to some library seems indispensable, in all schools where any attention is paid to composition. The ability to express ideas in writing, with vigor and perspicuity, is now deemed so valuable, that, in many places, Composition has been added to the list of Common-school studies. But the earlier exercises of children, in composing (however it may be with the later), can consist of little more than rendering other men's thoughts in their own language. If the most distinguished authors desire to consult books before they attempt the discussion of great subjects, then to require children to write compo-

sition, without supplying them with some resources whence to draw their materials, is absurdly to suppose, not only that they are masters of a select and appropriate diction in which to clothe their thoughts and feelings, but also that they possess a degree of originality which even the ablest writers do not claim.

For these and other reasons, some of the most judicious and successful teachers have carried into school any little collection of books belonging to themselves, and have realized great benefit from it. Such collections, however, must generally be scanty, and can rarely, if ever, be the most appropriate and useful; besides, such a practice is, at least, liable to misuse. But a well-selected library, — such as that which is now in a course of preparation under the auspices of the Board, — in which all possible respect is paid to the right of private judgment on questions concerning which an unhappy difference of opinion prevails amongst the best men in the community, — such a library would avoid all danger, and increase every benefit. Every legitimate excitement or encouragement brought to bear upon our children in the schools, not only quickens progress, but diminishes the occasion for discipline.

Finally, from all I have heard and learned, it is my belief that the Legislature can do no one thing which shall be so acceptable to the friends of Common-school education in Massachusetts, as to devise some plan by which a school library shall be placed in every district school in the State. By the accomplishment of an object so permanently useful, they will win not only a sincere, but a lasting gratitude. Many of the districts are small; and without some assistance, they may not, for a long time, perhaps never, obtain a library by their own means. When we consider that the average number of all the scholars, in all the public schools, is less than fifty for each, and also how many large schools there are in Boston and other cities, and in the central districts of large towns, we shall at once perceive how many small schools there must be. In the majority of instances, the small schools are in the exterior districts of the

towns. They draw but little money, because of the small number of scholars which they contain. Hence, they have short schools, and seldom give large compensation to teachers. The fact that the schools are small proves that the lands of the district are not very fertile, and also that it is not a place of much trade or business; otherwise the population would be denser and the schools larger. Their means, therefore, cannot be very abundant; and hence the necessity for assistance. There is another consideration which must have great weight with all, who desire, as far as practicable, to furnish equivalents for natural disadvantages. The project of libraries for schools has lately been so much discussed, and has found such general favor with the public, that rich and populous school districts will not long remain without them. This class of large and wealthy districts have much the largest schools; they are able to offer more liberal compensation to teachers; and if, in addition to these advantages, they possess libraries also, while the districts less favorably circumstanced in point of wealth and population are destitute of them, the inequality of condition and privileges already existing will be still further increased. Every well-wisher of his kind will more cordially co-operate in measures which bring forward those who are in the rear, than with measures which still carry farther onward those already in advance. Poverty ought never to be a bar against the attainment of that degree of knowledge which is necessary for the intelligent performance of every duty in life.

After the munificent endowment by the State of two of its colleges, and many of its academies, it is thought that the time has arrived when something should be done for the broader institution of the schools. Whatever claims may be made by the friends of colleges and academies in their behalf, they cannot deny that the Common School is still more important, because on this basis the welfare of the whole people more immediately rests. When the State endowed its first university, and visited it from time to time, for almost two centuries, with substantial proofs of its liberality, it surely did not mean to establish a law

of primogeniture in its favor, and to disinherit the younger members of the family, that is, the Common Schools. It is expected, too, by the friends of the schools throughout the State, that those who have received benefits and enjoyed the honors of a university education, — which is claimed to exert a harmonizing and liberalizing effect upon the mind and character, — will not themselves refute the claim by a want of liberality towards the only institutions where the masses can be benefited.

Amongst all the letters which I have received on the subject of libraries, not one man in his individual capacity, and but one board of school-committee men, has questioned their desirableness and utility. And the reason assigned in the latter case was, that the town to which the committee belonged already possessed a sufficient number of books accessible to all its inhabitants. The conventions held in the different counties have approved and recommended the plan by votes, which, with two exceptions, had not a dissenting voice; and in neither of the excepted cases was there more than half a dozen negative votes. Probably so entire a unanimity would not be found to exist on any other subject whatever.

In view of these facts and considerations, I cannot close this Report without suggesting to the Board the expediency of inviting the special attention of the Legislature to this subject, as one which has an important bearing upon the welfare of the present age, and a bearing still more important upon the welfare of coming generations.



## REPORT FOR 1840.

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GENTLEMEN, —

. . . The plan of Union Districts commends itself, on the score of economy, to every man who desires to make a given amount of money accomplish more good, or to derive an equal amount of good from less money. In my Report on Schoolhouses, vol. ii p. 468, it is arithmetically proved, that, where four districts can be united for this purpose, a given sum of money, which now sustains four summer schools taught by females, and four winter schools taught by males, only four months each, would, under the proposed arrangement, maintain the four summer schools six months each, and a winter school eight months instead of four; would give the master \$35 a month instead of \$25, and would still leave in the treasury an unexpended balance of \$20. The demonstration as to the economy of the plan being there wrought out, and open to the inspection of any one who will examine it, I leave this topic with a single statement illustrative of the necessity of adopting some immediate and efficient remedy. In my circuit last autumn through a part of the State which I had not visited before, I saw six schoolhouses all situated on the same road, the extreme ones of which were but a mile and a half apart, and of course only three-fourths of a mile from a central point. In these the uniform practice had been to employ six females in summer and six males in winter. And thus, as it regards the winter schools, the wages and board of six men had been paid, and fuel for six fires provided, when one male principal, who might have received and been



worthy of the most liberal salary, — with suitable female assistants if necessary, — might have accomplished ten times the good at a greatly reduced expense. All this was acknowledged as soon as pointed out, and assurances of a change gratefully given. How great would be the gain, if the spirit of economy, which is so often active at the town-meeting when the money for schools is granted, could be transferred to its expenditure by a wiser mode of appropriation !

In regard to management and discipline, a more trying situation, to a person of judgment and good feelings, cannot well be conceived, than that of having the sole charge of a school of sixty, seventy, or eighty scholars, of all ages, where he is equally exposed to censure for the indulgences that endanger good order, and for the discipline that enforces it. One of the inquiries contained in the circular letter to the school committees, in 1838, was respecting the ages of the children attending our public schools. By the answers, it appeared, that, in very many places, the schools were attended by scholars of all ages, between four years and twenty, and, in some places, by those between two years and a half and twenty-five ; and thus the general regulations of the school, as to order, stillness, and the observance of a code of fixed laws, were the same for infants but just out of their cradles, and for men who had been enrolled seven years in the militia. Now, nothing can be more obvious than that the kind of government appropriate and even indispensable for one portion of these scholars was flagrantly unsuitable for the other. The larger scholars, with a liberal recess, can keep their seats and apply their minds for three consecutive hours. But to make small children sit both dumb and motionless, for three successive hours, with the exception of a brief recess and two short lessons, is an infraction of every law which the Creator has impressed upon both body and mind. There is but one motive by which this violence to every prompting of nature can be committed, and that is an overwhelming, stupefying sense of fear. If the world were offered to these children as a reward for this prolonged silence

and inaction, they would spurn it: the deep instinct of self-preservation alone is sufficient for the purpose. The irreparable injury of making a child sit straight and silent and motionless for three continuous hours, with only two or three brief respites, cannot be conceived. Its effect upon the body is to inflict severe pain, to impair health, to check the free circulations in the system (all which lead to dwarfishness), and to misdirect the action of the vital organs, which leads to deformity. In regard to the intellect, it suppresses the activity of every faculty; and as it is a universal law in regard to them all, that they acquire strength by exercise, and lose tone and vigor by inaction, the inevitable consequence is, both to diminish the number of things they will be competent to do, and to disable them from doing this limited number so well as they otherwise might. In regard to the temper and morals, the results are still more deplorable. To command a child whose mind is furnished with no occupation to sit for a long time silent in regard to speech, and dead in regard to motion, when every limb and organ aches for activity; to set a child down in the midst of others, whose very presence acts upon his social nature as irresistibly as gravitation acts upon his body, and then to prohibit all recognition of or communication with his fellows, — is subjecting him to a temptation to disobedience, which it is alike physically and morally impossible he should wholly resist. What observing person who has ever visited a school where the laws of bodily and mental activity were thus violated has failed to see how keenly the children watch the motions of the teacher; how eagerly, the first moment when his face is turned from them, or any person or object intervenes to screen them from his view, they seize upon the occasion to whisper, laugh, chaffer, make grimaces, or do some other thing against the known laws of the school? Every clandestine act of this kind cultivates the spirit of deception, trickery, and fraud; it leads to the formation, not of an open and ingenuous, but of a dissembling, wily, secretive character. The evil is only aggravated when the teacher adopts the practice of looking out under his eye-

brows, as it is called, or of glancing at them obliquely, or of wheeling suddenly round, in order to detect offenders in the act of transgression. Such a course is a practical lesson in artifice and stratagem, set by the teacher; and the consequence is, that to entrap on the one side and elude on the other soon becomes a matter of rivalry and competition between teacher and pupils. Probably it is within the recollection of most persons, that, after the close of some school-terms, both teacher and pupils have been heard to boast, — the one how many he had insnared, the others how often they had escaped; thus presenting the spectacle of the moral guide of our youth, and the moral subjects of his charge, *boasting* of mutual circumvention and disingenuousness.

Teachers who manage schools with a due observance of those laws with which the Creator has pervaded the human system, are accustomed, when scholars have become restless and uneasy, to send them out to run, or in some way to take exercise, until the accumulation of muscular and nervous energy, which prompted their uneasiness, is expended. They will then return to the schoolroom to sit with composure, or to study with diligence and vigor.

I have deemed this matter of so much consequence, and have found, in some places, such inveterate false habits and modes of thinking respecting it, that I have desired to fortify my own views by those of gentlemen whose authority none will venture to question. Accordingly, I have obtained the opinions of some of the most eminent physicians and physiologists in the State, and have selected three from the number to be placed in the Appendix.\*

The remedies for these various evils are the establishment of Union Schools, wherever the combined circumstances of territory and population will allow; the consolidation of two or more districts into one, where the union system is impractic-

\* The letters referred to are from Dr. S. B. Woodard, Principal of the State Lunatic Hospital at Worcester; Dr. James Jackson, of Boston; and Dr. S. G. Howe, Principal of the Perkins Blind Institution, South Boston. They entirely confirm Mr. Mann's views.

cable; and, where the population is so sparse as to prevent either of these courses, there to break in upon the routine of the school, either by confining the young children for a less number of hours, or by giving to them two recesses each half-day. The health of the body must be preserved, because it is the only medium through which the brightest intellect and the purest morals can bless the world.

If it were possible to measure or gauge the quantity and quality of instruction which the teacher could give under the union system, compared with that which he can give in a school composed of scholars of all ages, and in all stages of advancement, no further proof in favor of a classification of the children into divisions of older and younger would be needed. A teacher well versed in the better modes of instruction, which are beginning to be adopted, will, in most branches, teach each one, of a class of twenty, more in the same time than he could teach any one individual of the same class. What an accession to his usefulness, that is, to the improvement of the children, would thus be gained! And is it not an unpardonable waste of means, where it can possibly be avoided, to employ a man, at \$25 or \$30 a month, to teach the alphabet, when it can be done much better, at half-price, by a female teacher?

The Union School is found to improve all the schools in the constituent districts. The children in the lower schools look upward to the higher with ambition, and labor more earnestly, that they may be prepared to enter it. So far as my knowledge extends, no districts which have adopted could be induced to abandon it.

. . . A brief consideration of a few of the qualifications essential to those who undertake the momentous task of training the children of the State will help us to decide the question, whether the complaints of the committees, in regard to the incompetency of teachers, are captious and unfounded; or whether they proceed from enlightened conceptions of the nature of their duties and office, and therefore require measures to supply the deficiency.

1st. One requisite is a knowledge of Common-school studies. Teachers should have a perfect knowledge of the rudimental branches which are required by law to be taught in our schools. They should understand, not only the rules, which have been prepared as guides for the unlearned, but also the principles on which the rules are founded, — those principles which lie beneath the rules, and supersede them in practice, and from which, should the rules be lost, they could be framed anew. Teachers should be able to teach *subjects*, not manuals merely.

This knowledge should not only be thorough and critical, but it should be always ready at command for every exigency, — familiar like the alphabet, so that, as occasion requires, it will rise up in the mind instantaneously, and not need to be studied out with labor and delay. For instance: it is not enough that the teacher be able to solve and elucidate an arithmetical question, by expending half an hour of school-time in trying various ways to bring out the answer; for that half-hour is an important part of the school-session, and the regular exercises of the school must be shortened or slurred over to repair the loss. Again: in no school can a teacher devote his whole and undivided attention to the exercises, as they successively recur. Numerous things will demand simultaneous attention. While a class is spelling or reading, he may have occasion to recall the roving attention of one scholar; to admonish another by word or look; to answer some question put by a third; or to require a fourth to execute some needed service. Now, if he is not so familiar with the true orthography of every word, that his ear will instantaneously detect an error in the spelling, he will, on all such occasions, pass by mistakes without notice, and therefore without correction, and thus interweave wrong instruction with right through all the lessons of the school. If he is not so familiar, too, both with the rules of reading, and with the standard of pronunciation for each word, that a wrong emphasis or cadence, or a mispronounced word, will jar his nerves, and recall even a wandering attention, then innu-

merable errors will glide by his own ear unnoticed, while they are stamped upon the minds of his pupils. These remarks apply with equal force to recitations in grammar and geography. A critical knowledge respecting all these subjects should be so consciously present with him, that his mind will gratefully respond to every right answer or sign made by the scholar, and shrink from every wrong one, with the quickness and certainty of electrical attraction and repulsion. In regard to the last-named branch, geography, a study which, in its civil or political department, is constantly mutable and progressive, the teacher should understand, and be able to explain, any material changes which may have occurred since the last edition of his text-book ; as, for instance, the erection of Iowa into a territorial government by the last Congress ; or, during the last year, the restitution of Syria to the Turkish government through the intervention of the Four European Powers. This establishment of a link between past events and present times, this realization of things as lately done or now doing, sheds such a strong light upon a distant scene, as makes it appear to be near us, and thus gives to all the scholars a new and inexpressible interest in their lessons.

However much other knowledge a teacher may possess, it is no equivalent for a mastership in the rudiments. It is not more true in architecture than in education, that the value of the work in every upper layer depends upon the solidity of all beneath it. The leading, prevailing defect in the intellectual department of our schools is a want of thoroughness, — a proneness to be satisfied with a verbal memory of rules, instead of a comprehension of principles, with a knowledge of the names of things, instead of a knowledge of the things themselves ; or, if some knowledge of the things is gained, it is too apt to be a knowledge of them as isolated facts, and unaccompanied by a knowledge of the relations which subsist between them, and bind them into a scientific whole. That knowledge is hardly worthy of the name, which stops with things, as individuals, without understanding the relations

existing between them. The latter constitutes indefinitely the greater part of all human knowledge. For instance, all the problems of plane geometry, by which heights and distances are measured, and the contents of areas and cubes ascertained, are based upon a few simple definitions which can be committed to memory by any child in half a day. With the exception of the comets, whose number is not known, there are but thirty bodies in the whole solar system. Yet, on the relations which subsist between these thirty bodies is built the stupendous science of astronomy. How worthless is the astronomical knowledge which stops with committing to memory thirty names!

At the Normal School at Barre during the last term the number of pupils was about fifty. This number might have been doubled if the visitors would have consented to carry the applicants forward at once into algebra and chemistry and geometry and astronomy, instead of subjecting them to a thorough review of Common-school studies. One of the most cheering auguries in regard to our schools is the unanimity with which the committees have awarded sentence of condemnation against the practice of introducing into them the studies of the university to the exclusion or neglect of the rudimental branches. By such a practice a pupil foregoes all the stock of real knowledge he might otherwise acquire; and he receives, in its stead, only a show or counterfeit of knowledge, which, with all intelligent persons, only renders his ignorance more conspicuous. A child's limbs are as well fitted in point of strength to play with the planets before he can toss a ball, as his mind is to get any conception of the laws which govern their stupendous motions before he is master of common arithmetic. For these and similar considerations, it seems that the first intellectual qualification of a teacher is a critical thoroughness, both in rules and principles, in regard to all the branches required by law to be taught in the Common Schools; and a power of recalling them in any of their parts with a promptitude and certainty hardly inferior to that with which he could tell his own name.

2d. The next principal qualification in a teacher is the *art of teaching*. This is happily expressed in the common phrase, *aptness to teach*, which in a few words comprehends many particulars. /The ability to acquire, and the ability to impart, are wholly different talents. The former may exist in the most liberal measure without the latter. It was a remark of Lord Bacon, that "the art of well-delivering the knowledge we possess is among the secrets left to be discovered by future generations." Dr. Watts says, "There are some very learned men who know much themselves, but who have not the talent of communicating their knowledge."\* Indeed, this fact is not now questioned by any intelligent educationist. Hence we account for the frequent complaints of the committees, that those teachers who had sustained an examination in an acceptable manner failed in the schoolroom through a want of facility in communicating what they knew. The ability to acquire is the power of understanding the subject-matter of investigation. Aptness to teach involves the power of perceiving how far a scholar understands the subject-matter to be learned, and what, in the natural order, is the next step he is to take. It involves the power of discovering and of solving at the time the exact difficulty by which the learner is embarrassed. The removal of a slight impediment, the drawing aside of the thinnest veil which happens to divert his steps or obscure his vision, is worth more to him than volumes of lore on collateral subjects. How much does the pupil comprehend of the subject? What should his next step be? Is his mind looking towards a truth or an error? The answer to these questions must be intuitive in the person who is apt to teach. As a dramatic writer throws himself successively into the characters of the drama he is composing, that he may express the ideas and emotions peculiar to each; so the

\* While writing this paragraph, I received the fifth report of the Glasgow Educational Society's Normal Seminary for 1839. It contains the following: "There is perhaps no mistake so fatal to the proper education and training of youth as the practical error of imagining, that, because a man possesses knowledge, therefore he will be able to communicate it. The knowledge of a Newton or a Bacon would avail little without a proper mode of communication."



mind of a teacher should migrate, as it were, into those of his pupils, to discover what they know and feel and need ; and then, supplying from his own stock what they require, he should reduce it to such a form, and bring it within such a distance, that they can reach out and seize and appropriate it. He should never forget that intellectual truths are naturally adapted to give intellectual pleasure ; and that, by leading the minds of his pupils onward to such a position in relation to these truths that they themselves can discover them, he secures to them the natural reward of a new pleasure with every new discovery, which is one of the strongest as well as most appropriate incitements to future exertion.

Aptness to teach includes the presentation of the different parts of a subject in a natural order. If a child is told that the globe is about twenty-five thousand miles in circumference, before he has any conception of the length of a mile or of the number of units in a thousand, the statement is not only utterly useless as an act of instruction, but it will probably prevent him ever afterwards from gaining an adequate idea of the subject. The novelty will be gone, and yet the fact unknown. Besides, a systematic acquisition of a subject knits all parts of it together, so that they will be longer retained and more easily recalled. To acquire a few of the facts gives us fragments only ; and even to master all the facts, but to obtain them promiscuously, leaves what is acquired so unconnected and loose that any part of it may be jostled out of its place and lost, or remain only to mislead.

Aptness to teach, in fine, embraces a knowledge of methods and processes. These are indefinitely various. Some are adapted to accomplish their object in an easy and natural manner ; others in a toilsome and circuitous one ; others, again, may accomplish the object at which they aim with certainty and despatch, but secure it by inflicting deep and lasting injuries upon the social and moral sentiments. We are struck with surprise on learning, that, but a few centuries since, the feudal barons of Scotland, in running out the lines around their extensive do-

mains, used to take a party of boys, and whip them at the different posts and landmarks in order to give them a retentive memory as witnesses in case of future litigation or dispute. Though this might give them a vivid recollection of localities, yet it would hardly improve their ideas of justice, or propitiate them to bear true testimony in favor of the chastiser. But do not those who have no aptness to teach sometimes accomplish their objects by a kindred method?

He who is apt to teach is acquainted, not only with common methods for common minds, but with peculiar methods for pupils of peculiar dispositions and temperaments; and he is acquainted with the principles of all methods whereby he can vary his plan according to any difference of circumstances. The statement has been sometimes made, that it is the object of Normal Schools to subject all teachers to one inflexible, immutable course of instruction. Nothing could be more erroneous; for one of the great objects is to give them a knowledge of modes as various as the diversity of cases that may arise. that, like a skilful pilot, they may not only see the haven for which they are to steer, but know every bend in the channel that leads to it. No one is so poor in resources for difficult emergencies as they may arise as he whose knowledge of methods is limited to the one in which he happened to be instructed. It is in this way that rude nations go on for indefinite periods, imitating what they have seen, and teaching only as they were taught.

3d. Experience has also proved that there is no necessary connection between literary competency, aptness to teach, and the power to manage and govern a school successfully. They are independent qualifications; yet a marked deficiency in any one of the three renders the others nearly valueless. In regard to the ordinary management or administration of a school, how much judgment is demanded in the organization of classes, so that no scholar shall either be clogged and retarded, or hurried forward with injudicious speed, by being matched with an unequal yoke-fellow! Great discretion is necessary in the assignment of lessons, in order to avoid, on the one hand, such short-

ness in the tasks as allows time to be idle; and, on the other, such over-assignments as render thoroughness and accuracy impracticable. and thereby so habituate the pupil to mistakes and imperfections, that he cares little or nothing about committing them. Lessons, as far as it is possible, should be so adjusted to the capacity of the scholar, that there should be no failure in a recitation not occasioned by culpable neglect. The sense of shame, or of regret for ignorance, can never be made exquisitely keen, if the lessons given are so long, or so difficult, as to make failures frequent. When "bad marks," as they are called, against a scholar, become common, they not only lose their salutary force, but every addition to them debases his character, and carries him through a regular course of training which prepares him to follow in the footsteps of those convicts who are so often condemned, that, at length, they care nothing for the ignominy of the sentence. Yet all this may be the legitimate consequence of being unequally mated or injudiciously tasked. It is a sad sight, in any school, to see a pupil marked for a deficiency, without any blush of shame, or sign of guilt; and it is never done with impunity to his moral character.

The preservation of order, together with the proper despatch of business, requires a mean between the too much and the too little, in all the evolutions of the school, which it is difficult to hit. When classes leave their seats for the recitation-stand, and return to them again, or when the different sexes have a recess, or the hour of intermission arrives, if there be not some order and succession of movement, the school will be temporarily converted into a promiscuous rabble, giving both the temptation and the opportunity for committing every species of indecorum and aggression. In order to prevent confusion, on the other hand, the operations of the school may be conducted with such military formality and procrastination, — the second scholar not being allowed to leave his seat until the first has reached the door, or the place of recitation, and each being made to walk on tiptoe to secure silence, — that a substantial part of every school session will be wasted in the wearisome pursuit of an object worth nothing when obtained.

When we reflect how many things are to be done each half-day, and how short a time is allotted for their performance, the necessity of system in regard to all the operations of the school will be apparent. System compacts labor; and when the hand is to be turned to an almost endless variety of particulars, if system does not preside over the whole series of movements, the time allotted to each will be spent in getting ready to perform it. With lessons to set; with so many classes to hear; with difficulties to explain; with the studious to be assisted; the idle to be spurred; the transgressors to be admonished or corrected; with the goers and comers to observe; — with all these things to be done, no considerable progress can be made, if one part of the wheel is not coming up to the work while another is going down. And if order do not pervade the school as a whole, and in all its parts, all is lost: and this is a very difficult thing; for it seems as though the school were only a point, rescued out of a chaos that still encompasses it, and is ready on the first opportunity to break in and re-occupy its ancient possession. As it is utterly impracticable for any committee to prepare a code of regulations co-extensive with all the details which belong to the management of a school, it must be left with the teacher; and hence the necessity of skill in this item of the long list of his qualifications.

The government and discipline of a school demands qualities still more rare, because the consequences of error in these are still more disastrous. What caution, wisdom, uprightness, and sometimes even intrepidity, are necessary in the administration of punishment! After all other means have been tried, and tried in vain, the chastisement of pupils found to be otherwise incorrigible is still upheld by law and sanctioned by public opinion. But it is the last resort, the ultimate resource, acknowledged on all hands to be a relic of barbarism, and yet authorized because the community, although they feel it to be a great evil, have not yet devised and applied an antidote. Through an ignorance of the laws of health, a parent may so corrupt the constitution of his child as to render poison a

necessary medicine ; and, through an ignorance of the laws of mind, he may do the same thing in regard to punishment. When the arts of health and of education are understood, neither poison nor punishment will need to be used, unless in most extraordinary cases. The discipline of former times was inexorably stern and severe ; and, even if it were wished, it is impossible now to return to it. The question is, what can be substituted, which, without its severity, shall have its efficiency ?

But how important is the relation in which a teacher stands towards a supposed offender ! If the grounds of suspicion are presumptive only, how nice the balance of judgment in which they should be weighed, lest, on the one hand, injustice be done by bringing a false accusation against the innocent ; or lest, on the other, a real offender should escape through mistaken confidence and charity ! If there be sufficient ground to put a pupil upon trial, the teacher in his own person combines the characters of the law-maker, by whom the rule, supposed to be transgressed, was enacted ; of the counsel who examines the witnesses ; of the jury who decides upon the facts ; and of the judge interpreting his own law, and awarding sentence according to his own discretion. And, after all this, he is the executive officer, inflicting the penalty himself has awarded, unless that penalty is remitted by the pardoning power, which also resides in him. Often, too, this representative or depository of so many functions is himself the person supposed to be offended ; and thus he presents the spectacle of a party in interest trying his own cause, and avenging his own insults against his own dignity. If he suffers the out-door consequences of inflicting punishment to enter his mind, his fears will become his counsellors, and they will be as false as his pride. This specification is not given for the purpose of excepting to that usage which makes the teacher the sovereign of the schoolroom, but only to show what danger of error there must be when teachers are employed who have had neither experience nor instruction, and whose judgment years have not yet begun to ripen. Are there not teachers to whom all the children in the district are intrusted

for their education, and for all the momentous and enduring interests connected with that word, to whom scarcely a parent in the district would surrender the care and management of his own children for the same length of time? Yet how much less incapable would the teacher be of governing and controlling a family of five or six children than a school of fifty or sixty! Every child ought to find at school the affection and the wisdom which he has left at home; or, if he has left neither wisdom nor affection at home, there is so much more need that he should find them at school.

A school should be governed with a steady hand, not only during the same season, but from year to year; substantially the same extent of indulgence being allowed, and the same restrictions imposed. It is injurious to the children to alternate between the extremes of an easy and a sharp discipline. It is unjust also for one teacher to profit by letting down the discipline of a school, and thus throw upon his successor the labor of raising it up to its former level.

4th. In two words the statute opens to all teachers an extensive field of duty, by ordaining that all the youth in the schools shall be taught "*good behavior*." The framers of the law were aware how rapidly good or bad manners mature into good or bad morals; they saw that good manners have not only the negative virtue of restraining from vice, but the positive one of leading, by imperceptible gradations, towards the practice of almost all the social virtues. The effects of civility or discourtesy, of gentlemanly or ungentlemanly deportment, are not periodical or occasional, merely, but of constant recurrence; and all the members of society have a direct interest in the manners of each of its individuals; because each one is a radiating point, the centre of a circle which he fills with pleasure or annoyance, not only for those who voluntarily enter it, but for those, who, in the promiscuous movements of society, are caught within its circumference. Good behavior includes the elements of that equity, benevolence, conscience, which, in their great combinations, the moralist treats of in his books of ethics, and

the legislator enjoins in his codes of law. The schoolroom and its playground, next to the family table, are the places where the selfish propensities come into most direct collision with social duties. Here, then, a right direction should be given to the growing mind. The surrounding influences which are incorporated into its new thoughts and feelings, and make part of their substance, are too minute and subtle to be received in masses like nourishment; they are rather imbibed into the system unconsciously by every act of respiration, and are constantly insinuating themselves into it through all the avenues of the senses. If, then, the manners of the teacher are to be imitated by his pupils, if he is the glass at which they "do dress themselves," how strong is the necessity that he should understand those nameless and innumerable practices in regard to deportment, dress, conversation, and all personal habits, that constitute the difference between a gentleman and a clown! We can bear some oddity or eccentricity in a friend whom we admire for his talents or revere for his virtues; but it becomes quite a different thing when the oddity or the eccentricity is to be a pattern or model from which fifty or a hundred children are to form their manners. It was well remarked by the ablest British traveller who has ever visited this country, that, amongst us, "every male above twenty-one years of age claims to be a sovereign. He is, therefore, *bound to be a gentleman.*"

5th. On the indispensable, all-controlling requisite of moral character, I have but a single suggestion to make in addition to those admirable views on this subject which are scattered up and down through the committees' reports. This suggestion relates to the responsibility resting on those individuals who give letters of recommendation or certificates of character to candidates for schools. Probably one-half, perhaps more, of all the teachers in the State are comparatively strangers in the respective place where they are employed. Hence the examining committee, in the absence of personal knowledge, must rely upon testimonials exhibited before them. These consist of credentials brought from abroad, which are sometimes obtained

through the partialities of relationship, interest, or sect; or even given lest a refusal should be deemed an unneighborly act, and the applicant should be offended or alienated by a repulse. But are interests of such vast moment as the moral influence of teachers upon the rising generation to be sacrificed to private considerations of relationship or predilection, or any other selfish or personal motive whatever? It may be very agreeable to a person to receive the salary of a teacher, but this fact has no tendency to prove his fitness for the station: if so, the poor-house would be the place to inquire for teachers; and what claim to conscience or benevolence can that man have who jeopardizes the permanent welfare of fifty or a hundred children for the private accommodation of a friend? In regard to pecuniary transactions, it is provided by the laws of the land, that whoever recommends another as responsible and solvent becomes himself liable for the debts which may be contracted, under a faith in the recommendation, should it prove to have been falsely given. The recommendation is held to be a warranty; and it charges its author with all its losses incurred, within the scope of a fair construction. It is supposed that, without this responsibility, the expanded business of trade and commerce would be restricted to persons possessing a mutual knowledge of each other's trustworthiness or solvency. But why should the precious and enduring interests of morality be accounted of minor importance, and protected by feebleness securities than common traffic? Why should the man who has been defrauded by an accredited peddler have his remedy against the guarantor, while he who is instrumental in inflicting upon a district, and upon all the children in a district, the curse of a dissolute, vicious teacher, escapes the condign punishment of general execration? In the contemplation of the law, the school committee are sentinels stationed at the door of every schoolhouse in the State to see that no teacher ever crosses its threshold who is not clothed, from the crown of his head to the sole of his foot, in garments of virtue; and they are the enemies of the human race, — not of contemporaries only, but of



posterity, — who, from any private or sinister motive, strive to put these sentinels to sleep in order that one who is profane or intemperate, or addicted to low associations, or branded with the stigma of any vice, may elude the vigilance of the watchmen, and be installed over the pure minds of the young as their guide and exemplar. If none but teachers of pure tastes, of good manners, of exemplary morals, had ever gained admission into our schools, neither the schoolrooms nor their appurtenances would have been polluted as some of them now are with such ribald inscriptions, and with the carvings of such obscene emblems, as would make a heathen blush. Every person, therefore, who indorses another's character, as one befitting a school teacher, stands before the public as his moral bondsman and sponsor, and should be held to a rigid accountability.

It will ever remain an honor to the Commonwealth of Massachusetts, that among all the reports of its school committees for the last year, so many of which were voluminous and detailed, and a majority of which probably were prepared by clergymen belonging to all the various denominations in the State, there was not one which advocated the introduction of sectarian instruction or sectarian books into our public schools; while, with accordant views, — as a single voice coming from a single heart, — they urge, they insist, they demand, that the great axioms of a Christian morality shall be sedulously taught, and that the teachers shall themselves be patterns of the virtues they are required to inculcate.

The limits proper for a report debar me from pursuing the topics under this head into further detail. It may, however, be briefly observed, on the one hand, that there are some delinquencies on the part of a teacher, such as the commencement of a school without having submitted to an examination by the committee as required by law; the unauthorized introduction of books into the school which are not contained in the list furnished by the committee; and the open disregard of directions given by the committee in respect to the classification or management of the school; all or either of which prove that the

teacher is destitute of good principles, that he is capable of a wilful violation or evasion of the laws of the State, and which, therefore, demonstrate his unfitness to fill a place where a spirit of subordination and of obedience to legitimate authority is among the lessons to be taught by practice as well as by precept. On the other hand, I can only refer to those eminent advantages which would accrue from employing a teacher, who, in addition to the qualifications enumerated in the statute-book, should possess a mind filled with stores of knowledge collateral to the branches pursued in the school; so that the pupils from day to day might not only be enlivened and instructed by apposite anecdote and impressive illustration, but be led to emulate the attainments which it is their delight to witness in him. So too, if from the extent of the teacher's acquirements, and the worth and dignity of his character, his society should be sought by all the families in the neighborhood; and, as he visited from house to house, he should exhibit a living example of those powers of instructing and of pleasing which are derived from intellectual resources and benevolence of disposition, — he would imbue the youth of the district with the love of knowledge and the desire of excellence, and thus lay the foundation of tastes, habits, and institutions which would shed their pure and ennobling influences over a long tract of future time. It is an authentic anecdote of the late Dr. Nathaniel Bowditch, that when, at the age of twenty-one years, he sailed on an East-Indian voyage, he took pains to instruct the crew of the ship in the art of navigation. Every sailor on board, during that voyage, became afterwards a captain of a ship. Such are the natural consequences of associating with a man whose mind is intent upon useful knowledge, and whose actions are born of benevolence.

#### CONSTANCY AND PUNCTUALITY OF ATTENDANCE.

. . . After the territory of the State has been judiciously restricted, good schoolhouses prepared, the scholars all provided both with the requisite number and proper kinds of books, and the town has made appropriations sufficiently liberal to com

mand the services of well-qualified teachers, — after all these preliminaries have been attended to, *the power of money ceases*. Up to this point the possession of property, and a spirit of liberality in bestowing it, are indispensable ; but here their agency terminates. The schools here pass, as it were, under a new jurisdiction, — from material to moral influences ; and if not cherished by the latter, they might as well have never been founded. So far, it is external organization, the preparation of an outward form merely ; but it is yet a cold, inert, dead mass, a body of clay. A vitality, a genial warmth, a living principle of energy, are now to be infused and spread through every fibre of this organized frame, or all the skill and cost which have been expended in its formation will be lost ; or what is far worse, and perhaps far more probable, that body will corrupt, and in its corruption engender a thousand pernicious forms of life. Moral power is now to be added to pecuniary, or the pecuniary had better never have been exerted.

Under this head, the first thing in the order of time, if not the first in point of importance, is the constant and punctual attendance of the scholars. Without authentic information on the subject of irregularity in attendance, the extent to which it has prevailed would have been wholly incredible. According to the school census of last year, the whole number of children in the State between the ages of four and sixteen was one hundred and seventy-nine thousand two hundred and

sixty-eight . . . . .	179,268
The average attendance during the summer of the	
same year (1839-40) was . . . . .	92,698
Do. during the winter . . . . .	111,844
Of the number attending who were under four years	
of age, there were . . . . .	7,844
Do. over sixteen years of age . . . . .	11,884
	<hr/>
	19,678

If the children under four years of age, who attended school, are deducted from the aggregate of attendance in summer, and those over sixteen

years from the aggregate of attendance in winter, the average attendance of those between four and sixteen will stand thus : —

For summer	.	.	.	.	.	.	.	84,854
For winter	.	.	.	.	.	.	.	100,010

And allowing twelve thousand as the number of the children who derive their whole education from academies and private schools, and therefore are not dependent upon the Common Schools at all, and deducting this number from the number of children in the State who are between the ages of four and sixteen years (thus  $179,268 - 12,000 = 167,268$ ), and the proportion of those who attend the Common Schools in summer, compared with the whole number dependent upon those schools, is as 84,854 to 167,268, or a very small fraction more than one-half; and the proportion of those who attend the same schools in winter, compared with the whole number dependent upon them, is as 100,010 to 167,268, or about ten-seventeenths only.

One striking aspect of this lamentable fact is the waste of money which it proves. The amount raised by taxes last year for teachers' wages and board, and fuel for the schools, was \$477,221.24. Of the portion of this sum which was expended for the summer schools, about one-half was lost, and of the portion expended for the winter schools, about seven-seventeenths, through irregularity in the attendance of the scholars; that is, of the \$477,221.24 raised for the support of our public schools, more than two hundred thousand dollars was directly thrown away by this voluntary abandonment of privileges. Nor, in this computation, is any thing included for interest on the cost of schoolhouses; for the loss of an equal proportion of the amount contributed for public schools (\$37,269.74); for an equal proportion also of the income (about \$20,000) of the State school fund; of the income also (15,270.89) of local funds for public schools; and of such portions of the income of the surplus revenue as individual towns have appropriated for the support of the schools. Vast, enormous as the main item

of the pecuniary loss is, a proportional loss from these sources (which in the whole amount to more than \$75,000) would materially enlarge it. If made out with the exactness of a business account, it would startle every business man in the community. Is it a subject for less surprise and regret because it is an educational account? What manufacturing or other business establishment could prosper if its laborers should absent themselves for a corresponding proportion of the time? What a direful calamity it would be justly deemed if some wide-spreading epidemic should visit the State from year to year, and deprive its children of an equal amount of their school privileges! It is well remarked, in one of the reports, that the promulgation of a law which should deprive the children of so noble a boon would produce a stamp-act ferment.

Who, beforehand, could have deemed it possible that a people so renowned for the virtues of frugality and economy, for their skill in turning limited means to a great account, would have tolerated this extent of wastefulness? The fact can be explained only on the ground that we were unaware of its existence. A parent who surmounts no obstacles to get his children daily to school, or who keeps them at home to subserve the pettiest convenience, has no conception how rapidly the column of absences lengthens, nor of the amount of its footing at the end of the term. He does not see, that, for every day's absence of his child, so much mental nourishment is withheld, his growth so much retarded, and that he is preparing to send out that child into the world an intellectual dwarf.

But, with the industrial habits of our community, this amount of money can be re-earned; indeed, it bears no proportion to the annual products of our labor and skill. But an item of loss is involved which neither labor nor skill can ever repair. The *time* is irrevocable. The spring-season of human life once past cannot be restored. The seed-time lost, the harvest also is lost. This forfeiture is without redemption.

The period during which, as a general rule, our children attend school, viz. between the ages of four and sixteen years,

is twelve years. The proportion of twelve years corresponding with this amount of absences is more than five years ; and therefore the children, on an average, for so much of the period of life that should be sacredly devoted to education, are deprived of ~~the~~ benefits. It must also be remembered that this deduction is not made from an entire year, but from the period of seven months and ten days, which was last year the average length of the schools ; so that schools, originally far too short, are cut down to a little more than half their apparent length, and so much even of a scanty mental subsistence is taken away. When Dr. Franklin said, "Time is money," he referred to adults : with children, time is more valuable than money ; it is education.

Our law, in establishing the legal age of majority, or period of emancipation from parental control, at twenty-one years, has followed the clear indications of nature. The period of minority and tutelage which precedes this age is necessary for the growth and preparation required for the labors and duties of manhood. And the indications of nature are equally clear in regard to the mind. The young mind needs the instruction and guidance of more mature minds ; it needs instruments and aids which it is incapable of preparing for itself ; nay, of the very existence of which it is itself ignorant until the full period, or nearly the full period, of legal minority has passed. Were it not so, the young of the human race would have come to their bodily and mental maturity, like the young of the inferior animals, at an earlier period, at the end of a month or a year, or at farthest at the end of a few years. It is this extensive and irrevocable portion of early life, proved by all observation and analogy to be so essential to a preparation for the duties of manhood, that is withdrawn ; and yet, when these neglected children shall arrive at the state of manhood, the duties belonging to that state will be required of them, or society, in some or in all of its relations, must suffer the penalty.

The main trunk of this evil of non-attendance sends off numerous branches, each of which is laden with its own peculiar

kind of bitter fruit. One effect is the injustice done to the teacher. If the register of the school bears the names of seventy different scholars, while the school is reduced by absences to an average of fifty, the common inference is, that although seventy is a greater number than one teacher can properly instruct, yet that he must be in fault if he does not teach the fifty in a competent manner, and advance them at a rapid rate. And yet a school averaging fifty scholars, reduced to that number from seventy by absences, is far more difficult, both to instruct and to govern, than a school of a hundred, all of whom attend regularly. A teacher, therefore, ought to be excused, not blamed, if he does not carry a small number of scholars rapidly forward if the number is made small by irregularity in attendance; yet those who send their children most irregularly are among the first to complain that they make little progress. The law (under a certain condition) requires the employment of an assistant teacher in all the public schools when the average number of scholars is fifty. But the principal teacher needs an assistant quite as much when a school of fifty is reduced to an average of thirty by absences as when it rises to seventy by a regular attendance of all the scholars belonging to it.

Again: if parents keep a child at home for two or three days, or for three or four half-days, in a week, he must, at least, be stationary, while the class to which he belongs is advancing. Hence, on his return to the school, he is not in a suitable condition to rejoin his class. But, generally, there is no other class in which he can be placed: and the formation of new classes to meet these cases would soon destroy classification altogether; because the classes would soon become as numerous as the scholars; and the school, which should march onward in regular divisions, would be reduced to a promiscuous throng of stragglers. Unless in extraordinary cases, therefore, the absent scholar must resume his place in the class; but, as the correct understanding of each successive step in his studies depends upon his having mastered the preceding steps, he is almost

necessarily incapacitated for intelligent study and good recitations. Out of this come, not merely loss of knowledge, but habits of incorrectness. The pupil, accustomed to failures and mistakes, is hardened into indifference ; he loses the greatest incitement to study, — the pleasure of understanding his lessons ; becomes careless, mischievous, disobedient ; draws down upon himself the displeasure of the teacher, perhaps punishment ; has all his associations established, adverse to learning ; looks for pleasure elsewhere ; is disgusted with the school ; and, as soon as possible, forfeits its privileges by abandonment, — the victim of irregular attendance.

The previous half-day, when a child expects to be absent, and the half-day after he has been so, are worth but little, even with good scholars. A child must have an almost inconceivable love of the school to desire to be there, when he knows that his ignorance of the lessons is to be put in direct and public contrast with the knowledge of his classmates ; and he must have an almost incredible love of knowledge to derive any gratification from the broken fragments of it which he can obtain at these irregular intervals. The spirit of pride, which would prompt him to stay away from the final examination of the school, lest he should be questioned upon parts of a study which he had never seen, or upon parts dependent upon what he had never seen, would promise as much for the character of the future man, as the spirit of indifference that could tamely bear the exposure.

Irregularity of attendance in any one member of a class is an act of injustice to every other member of it. After an absence, whether longer or shorter, the pupil, on his return, must inevitably learn his lessons in a very imperfect manner. He occupies double his share of the time at a recitation ; he requires double the amount of explanations from the teacher ; and these explanations, having been previously given, are not necessary for the others. Hence, the absent scholars are a perpetual clog upon the class. The advanced body must wait, while the laggards are coming up ; and thus not only the



absentees themselves, but the reputation of the teacher, the condition of the school, the character of the district, are all made to suffer the consequences of the guilt of unnecessary absence.

The effects of a want of punctuality, though less in extent, are similar in kind ; co-existing, they are a mutual aggravation.)

But, without entering into further detail respecting the losses, embarrassments, and injustice, resulting from this common delinquency, it becomes a matter of primary importance to inquire what measures can be adopted to dry up a fountain of mischief, which sends forth such copious streams.

The first thing to be done is to render the schoolhouse, both by its external appearance and its internal conveniences, a place of attraction ; or, at any rate, to prevent it from being a place odious to the sight, and painful to the bodies and limbs, of the pupils. The excuses and contrivances of the children to stay away from a repulsive, unhealthful school-house seem to be preventives, which Nature, in her wise economy, has provided, to escape the infliction of permanent evils.

The teacher can do much, in various ways, to diminish the cases of absence and tardiness.) When the question is debated, at the evening fire-side or at the breakfast-table, whether a child shall stay at home or go to school, the child has a voice and a vote, and often the casting vote, in its decision. If he loves the school, he will be an able advocate for the expediency of attending it. If errands or any little household services are to be done, the child will rise an hour earlier, or sit up an hour later, or bestir himself with greater activity, to accomplish them, that he may attend the school. For this object, he will forego a family holiday, postpone the reception or the making of a visit, endure summer's heat, or brave winter's cold. On the contrary, if the pupil looks towards the school with aversion ; if his heart sinks within him when the name of the teacher is mentioned, or his image is excited, — then every pretence for absence will be magnified, and invention will be

active in fabricating excuses. In the former case, he would almost feign to be well when he was sick ; here, he will feign to be sick when he is well. Hence it will very often happen, that the pleas or excuses of the pupil himself will determine the question of going or staying ; and it depends primarily upon the teacher which way this steady and powerful bias shall incline.

During the first part of the school-term, and while the habits of the pupils are forming, a skilful teacher may do much towards inspiring a laudable pride in the scholars, in regard to constancy and promptness. He can cause a public opinion to be spread through the school, that absence or tardiness, without the strongest reasons, is a stigma on the delinquent, a dishonorable abandonment of the post of duty. When errors are committed, or difficulties felt, in consequence of either of these causes, he can point out the relation between the cause and its effect, and warn against a repetition. To save the feelings of a child who comes late, or after a half-day's absence, and renders a valid excuse, he can acquit him before the school of the apparent neglect. He can refer to the state of the Register in a brief remark at the close of the day ; taking occasion, if the attendance is full, to commend the scholars for it, — to express his regret and mortification if it is not ; but always so measuring and attempering his blame and his praise, that none shall be disheartened by the severity of the former, and that the latter shall not become valueless by its superabundance. If regularity and punctuality could be secured, during a four months' school, by expending an entire week in this way at its beginning, the loss would be repaid sevenfold before its close. If the teachers have not consideration enough to speak on these subjects to their pupils, how can they expect that the pupils, unprompted, will originate proper views concerning their importance ?

There is one act of justice which a teacher, who demands punctuality, should never fail of rendering. Let him observe the golden rule, and, when he demands punctuality of his pupils,

be punctual himself, — punctual, not only in the hour of commencing his school, but in the hour of closing it. Pupils have a sense of justice on this subject: if the regular intermission is an hour, and the afternoon session commences at one o'clock, they want to be dismissed at twelve. In this respect, let the teacher bestow what he demands, and enforce his precept by his example; or, at least, when the morning or the evening hour arrives for dismissing the school, let him bring its exercises to a pause, and give his pupils an option to retire or to remain. Years of mere talk are often lost upon children, while a practical lesson is never without its effect.

Some teachers have adopted the plan of sending, to the parents and guardians of all the scholars, weekly reports, or cards, containing an account of all cases of absence or tardiness. In some instances, these cards contain also a description of the quality of recitations, of the general deportment of the children, or whatever else the teacher desires the parent or guardian to be acquainted with.

To secure a prompt attendance at the opening of the school, each half-day, some teachers make it their practice, during the first five or ten minutes of the school, to have an exercise in vocal music, or to relate some useful and instructive anecdote, or to read an interesting incident from a biography, or to give a description of a curious fact in natural history; or, where there is apparatus, to perform, occasionally, a striking experiment, and explain to what department of business or the arts it is related; to show the pupils, for instance, that, in an exhausted receiver, a feather falls as rapidly as a stone; that, without air, gunpowder will not burn; how a steam-engine is made, or a rainbow formed. Why should all the curiosity of children be pent up for months, to vent itself, at last, on the occasion of raree-shows, circus-riding, or militia musters?

The teacher ought also to visit the parents of children who attend irregularly, and kindly and affectionately to expostulate with them on the irremediable injury they are inflicting on

their offspring, both by the time they lose, and the bad habits they form.

In several of the larger towns in the State, the school-committees have enacted positive regulations, excluding for the forenoon or afternoon session all who come late; and for the residue of the term, all who are absent, unless from sickness or some other disabling cause, for a fixed number of days or half-days. There may be some objections to this course,—such as the fact, that truant-dispositioned boys may contrive to be absent the requisite number of days, or half-days, for the very purpose of being excluded afterwards; but almost any other evil is less than the combined influence of the innumerable throng that follow in the train of a general irregularity and tardiness. For most of the scholars, this last-mentioned method is very effectual. It is the practice of many of the lyceums in the State to close the doors of the lecture-room at a given hour; and railroad-cars and steam-boats have a fixed time for starting,—the consequence of which is that everybody is punctual; and, were all the gains of this punctuality added together, it would be found that years of time are saved daily by the regulation.

Some towns, in order to bring the force of a pecuniary motive to bear upon the subject, distribute the school-money among the districts, not in the ratio of the children between four and sixteen years of age, but in the ratio of their attendance upon the schools.

Although teachers, as a body, can do more than any other class in the community to abate the evils of inconstant and tardy attendance; although school-committees can do something through the instrumentality of school-regulations, and even towns can make their appropriations of money subserve the same end; yet neither of these, nor all of them united, can complete the work. The final, authoritative decision, in each case, rests with parents. They, therefore, should be appealed to with the most earnest and importunate solicitations, not to be guilty of so great cruelty to their own children, of so

great injustice towards the teacher and towards their neighbors, as to cause or suffer those children, except in cases of imperious necessity, to be absent from the school a single day of the term or a single hour of the day. From time immemorial, in all schools, truants have been regarded as a high offence in a pupil, and forbidden under the sanction of severe corporal punishment; but it is difficult to see why an unnecessary absence from school at the pleasure of the child is worse than an unnecessary absence at the pleasure of the parent. The real cause of the difficulty must be, that parents are not aware of its existence, and of the manifold mischiefs it involves. Until recently, even the well-informed friends of education were not apprised of its magnitude; as, before the use of the Register, no authentic means of making it known existed. The diffusion of a knowledge, both of the fact and of its consequences, cannot fail to produce a remedy; and for this purpose, as I have elsewhere suggested, the reading of the Abstracts, at meetings of the inhabitants of the districts convened at the schoolhouse, or other convenient place; the circulation of their contents by means of lectures and newspapers; the visitation of negligent parents by the teachers and by the committees; together with conversations held, on all proper occasions, by those who know more of the subject with those who know less,—will be rapid and effectual means of conveying the information to the very individuals who need it, and must lead, in the end, to a much-needed reform. It is surprising and cheering to know what can be done by the combined and harmonious exertions of all to accomplish this object. There were many families of children, last winter, who did not miss a single day in their attendance; and in one school, although the roads were almost impassable from snow, there was scarcely the absence of a scholar during the whole school-term.

If the school is to continue four months, and parents or guardians cannot send their children more than two or three, let them be sent continuously while they are sent at all, and

taken wholly from school the residue of the time. Six weeks of constant attendance is better than three months scattered promiscuously over a four-months' school. So, if nine o'clock comes too early in the morning for punctual attendance, let the school begin at ten, or even at half-past ten. Almost any thing is better for children than to form the pernicious habit of tardiness, which, in regard to the rights of others, has all the practical effect of dishonesty, and varies but a shade from it in the motive.

Notwithstanding the melancholy view of the subject presented by existing facts, yet when we consider the excessive severity of the last winter; the depth of snow, which for a long period overspread all the inland counties, rendering the roads nearly impassable for weeks together; and also the fact, that, in many places, children suffered to an extraordinary degree from epidemic sickness,—the average attendance was better than in former years. It was not until last year that any return was ever made of the children under four and over sixteen years of age attending the schools. The number was found to be about twenty thousand. Heretofore, in comparing the average number of children in school with the whole number of children in the State between four and sixteen years of age, for the purpose of ascertaining what proportion of the whole number were in school, those who were below the age of four, and above that of sixteen, have been reckoned as between four and sixteen, and thus have, materially swelled the apparent proportion of attendants.

#### MANIFESTATION OF PARENTAL INTEREST.

Sovereign, reigning over and above all other influences upon the school, is, or rather might be, that of the parents. The father, when presiding at his table, or returning home at evening from the labors of the day; the mother, in that intercourse with her children which begins with the waking hour of the morning and lasts until the hour of sleep,—enjoy a continuing opportunity, by arranging the affairs of the household in

such a way as to accommodate the hours of the school ; by subordinating the little interests or conveniences of the family **to the paramount** subject of regular and punctual attendance ; by manifesting such an interest in the studies of each child, that he will feel a daily responsibility, as well as a daily encouragement in regard to his lessons ; by foregoing an hour of useless amusement or a call of ceremony, in order to make a visit to the school ; by inviting the teacher to the house, and treating him, not as a hireling, but as a wiser friend ; by a conscientious care in regard to their conversation about the school, and their award of praise or blame ; in fine, by all those countless modes which parental affection, when guided by reason, will make delightful to themselves, the parents can inspire their offspring with a love of knowledge, a habit of industry, a sense of decorum, a respect for manliness of conduct and dignity of character, prophetic of their future usefulness and happiness and honor.

For one who has not traversed the State, and made himself actually acquainted with the condition of the schools by personal inspection and inquiry, it is impossible fully to conceive the contrasts they now present. I have no hope, therefore, of making myself adequately understood, when I say, that in contiguous towns, and even in contiguous districts, activity and paralysis — it is hardly too much to say life and death — are to be found side by side. Wherever a town or district has been blessed with a few men, or even with a single man, who had intellect to comprehend the bearings of this great subject, and a spirit to labor in the work, there a revolution in public sentiment has been effected, or is now going on. In some districts, last winter, the prosperity of the school became a leading topic of conversation among the neighbors ; the presence of visitors, from day to day, cheered the scholars ; a public spirit grew up among them, animating to exertion, and demanding courteous, honorable, just behavior ; the consequence of which was, that, by a law as certain as that light comes with the rising of the sun, a proficiency surpassing all former example was made ; and, when

the schools drew to a close, a crowd of delighted spectators attended the final examination, which, from the interest and the pleasure of the scene, was prolonged into the night. In some places, the visitors who did not come early to this examination could not obtain admittance on account of the crowded state of the house ; and in one, although a cold and driving snow-storm lasted through the day, yet a hundred parents attended, whom the inclemency of the weather could not deter from being present to celebrate this harvest-home of knowledge and virtue ; while on the same occasion, in an adjoining town, perhaps in a bordering district, a solitary committee-man dropped grudgingly in to witness a half-hour of mechanical movements, got up as a mock representation of knowledge, and to look at the half-emptied benches of the schoolroom made vacant by deserters. These differences are not imaginary, they are real ; and their proximate cause is the interest, or the want of interest, manifested by the parents toward the schools.

It is a celebrated saying of the French philosopher and educationist, Cousin, that " as is the teacher, so is the school." In regard to France and Prussia, where the schools depend so much upon the authority of the government, and so little upon the social influences of the neighborhood where they exist, this brief saying is the embodiment of an important truth ; but, with our institutions, there is far less reason for giving it the currency and force of a proverb. Here, every thing emanates from the people : they are the original ; all else is copy. If, therefore, the transatlantic maxim, which identifies the character of the school with that of the teacher, be introduced amongst us, it must be with the addition, that " as are the parents, so are both teacher and school."

A visit to the school by the parents produces a salutary effect upon themselves. Although it is feeling which originates and sends forth conduct, yet conduct re-acts powerfully upon feeling ; and, therefore, if parents could be induced to commence the performance of this duty, they would soon find it not only delightful in itself, but demanded by the force of



habit. Nor is it any excuse for their neglect, that they are incapable, in point of literary attainments, of examining the school, or of deciding upon the accuracy of recitation. If they have no knowledge to bestow in instruction, they all have sympathy to give in encouragement. Indeed, the children must be animated to exertion before they will make any valuable or lasting attainment. This animation the parents can impart, and thus become the means of creating a good they do not themselves possess.

It is surprising that the sagacity of parental love does not discover that a child, whose parents interest the teacher in his welfare, will be treated much better in school than he otherwise would be ; and this, too, without the teacher's incurring the guilt of partiality. If the teacher is made acquainted with the peculiarities of the child's disposition, he will be able to manage him more judiciously, and therefore more successfully, than he otherwise could ; he will be able to approach the child's mind through existing avenues, instead of roughly forcing a new passage to it ; and thus, in many instances, to supersede punishment by mild measures. A wise physician always desires to know the constitution and habit of his patient before he prescribes for his malady ; and a parent who should call a medical practitioner to administer to a sick child, but should refuse to give him this information, would be accounted insane. But are the maladies of the mind less latent and subtle and elusive than those of the body ? and is a less degree of peril to be apprehended in the former case than in the latter from the prescriptions of ignorance ? I have been credibly informed of a case where a child received a severe chastisement in school for not reading distinctly, when the inarticulateness was occasioned by a natural impediment in his organs of speech. The parent sent the child to school without communicating this fact to the teacher ; and, under the circumstances of the case, the teacher mistook the involuntary defect for natural obstinacy. This may seem an extreme case, and one not likely to happen ; but, doubtless, hundreds of similar though less discoverable ones,

in regard to some mental or moral deficiency, are daily occurring. Again : if parents do not visit the school until at or near its close, they may then discover errors or evils whose consequences might have been foreseen on an earlier visit, and thus prevented. It is another fact, eminently worthy of parental consideration, that many young and timid children, unaccustomed to see persons not belonging to the family, are almost paralyzed when first brought into the presence of strangers. An excessive diffidence cripples their limbs, and benumbs all their senses ; and it is only by their being gradually familiarized to company, that the fetters of embarrassment can be stripped off, and the shy, downcast countenance be uplifted. After a few years of neglect, this awkwardness and shamefacedness become irremediable : they harden the whole frame, as it were, into a petrification ; and their victim always finds himself bereft of his faculties at the very moment when he has most need of freedom and vigor in their exercise. On the other hand, pert, forward, self-esteeming children, who are unaccustomed to the equitable reciprocities of social intercourse, commit the opposite error of becoming rude, aggressive, and disdainful, whenever brought into contact with society. Now, one of the best remedies or preventives which children can enjoy, both for this disabling bashfulness, and for this spirit of effrontery, is the meeting of visitors in school, where a previous knowledge of what the occasion demands helps them to behave in a natural manner, notwithstanding the consciousness that others are present ; and where they are relieved from the double embarrassment of thinking both what they are to do, and how it should be done. Especially is it necessary that mothers should accompany sensitive and timid children when they first go to school, to obviate a distrust of the teacher, or a fear of other children, which might otherwise infix in the mind a permanent repugnance to the place. Whatever confers upon the school a single attraction, or removes from it one feature of harshness, clears the avenue for a more ready transmission of knowledge into the pupils' minds.

RETROSPECT. — NUMBER AND COMBINATION OF INFLUENCES  
NECESSARY TO A GOOD SCHOOL.

In discussing the various topics embodied in this Report, and in pointing out, under each successive head, the imperfections belonging to it, — imperfections which prevent our school system from conferring those abundant and precious benefits it is capable of bestowing, — I have not been without fear that my remarks might seem to wear an aspect of accusation, and to savor of harshness ; and although it might be admitted that no just exception could be taken to the views presented on any particular topic, still, that the tenor of the whole might seem too condemnatory and reprehensive. To be the bearer of unwelcome tidings is proverbially a thankless office ; and the fidelity that tells a friend of his faults is too apt to forfeit the friendship which it should have strengthened. Yet to these general rules there are noble exceptions. A wise man wishes to know what is wrong in his affairs, that he may rectify it ; and every sincere lover of excellence rejoices to be made acquainted with his faults, that he may correct them. In commenting, therefore, upon what I consider the imperfections of our system, in good faith, and with a single eye to their removal, I have proceeded upon the conviction that our people do possess that wisdom and that love of excellence which desires to “forget the things which are behind,” and, in the career of well-doing, to “press forward to those which are before ;” and rather to devote their energies to still higher achievements than ignobly to waste them in vain-glorying and self-eulogy. It would have been easy for me — and, could duty have allowed, it would have been delightful — to have occupied much more time, and to have filled a much larger space, in recounting those merits and excellences of our system of free schools, which, abroad as well as at home, it is acknowledged to possess ; in pointing to the bright train of blessings which, from age to age, it has been the means of conferring upon the people of this State, which it is now conferring, and, as it remains steadfast while the

generations rise and pass away, it promises still to confer upon unborn millions. But, at best, the pleasure of self-adulation is fleeting, and it leaves no abiding improvement behind.

It should be remembered, too, that, in the administration of our system, a larger share of power is possessed by the people than in any other state or country in the world. If it were true here, that as soon as any error or deficiency became known to the Legislature, or to any central and supervisory body, they could forthwith issue an edict for its correction, such a summary mode of proceeding would supersede the necessity of all explanation. But, where all measures of improvement and reform are to be carried out by the people at large, it becomes necessary that they should first be made acquainted with the evils which it is their interest and duty to remedy; and, for this purpose, I have endeavored faithfully to perform the unwelcome task of describing them.

The explanation, and, to some extent, the excuses, for the deficiencies here enumerated, are to be found in the number and complexity of the parts whose combined and harmonious action is essential to a good school. We have no other institution where such a confluence of favorable influences is necessary to the production of the desired result; nor have we any whose usefulness is so liable to be impaired, or even destroyed, by a single adverse tendency. A long train of measures is requisite to accomplish the end, and a failure in any one of the series is ruin. If the schoolhouse be bad, in regard to its location or internal construction, then not only will the improvement in the children's minds be materially lessened, but the healthiness of their bodies will be exposed to continual danger. If the house be otherwise well built, but deficient in the single requisite of ventilation, two-thirds of all the intellectual power of the children will be destroyed at the very moment when they are called upon to exercise it. In the whole range of science, no fact is better established than that the breathing of impure air benumbs and stupefies every faculty; and, therefore, to call upon children to study or understand or remember, while we give them impure air for breathing, is

as absurd as to put fetters upon their limbs when we wish them to run swiftly, or to interpose an opaque body between their eyes and any object which we wish them to see clearly. But if the schoolhouse be the best that art can build, yet, if the town grants only penurious sums of money, the school will but just begin when the means of supporting it will end. This is the false economy of saving in the seed, though thirty or sixty or a hundred fold be lost in the harvest. / Even when the town makes liberal grants of money, in proportion to its valuation and census, still, if it has unwisely divided its territory into minute districts, it defeats its own liberality ; for, by attempting to support so many schools with disproportionate means, it gives an efficient support to none. / But with a good schoolhouse, and with such large and populous districts, or union districts, as give the multiplying power of union and concert to individual action, still, the employment of a bad teacher will vitiate the whole ; and the place will have been prepared, and the money appropriated, only to gather the children into a receptacle, where bad feelings and passions, bad language and manners, will ferment into corruption ; and, without a good prudential and superintending committee, the chance of securing the services of a good teacher becomes so small as to elude even a fractional expression. And, again, if the most perfect teacher is obtained, still the scholars must be brought within the circle of his influence in order to be benefited ; and, therefore, absence, irregularity, and tardiness must be prevented, or the good teacher will have been employed in vain. Let all other influences be propitious, and the single circumstance, of which so little has heretofore been thought, viz., a diversity of class-books for scholars of similar ages and attainments, will derange any operation of the school ; because no perseverance, no fertility of resources, on the part of the teacher, can carry it forward if each pupil brings a different book. The obstacle defies human genius. All that reciprocal aid and stimulus is lost which the different minds of a class afford each other when they have once been awakened, and their attention turned upon the same point. To expect progress under this embar-

rassment is as unreasonable as it would be for a singing-master to expect concord of sounds when all his pupils were singing simultaneously from different notes. /Even if all the preceding arrangements and appointments are perfect, it will yet be true that not one-half of the capabilities of the school will be developed, unless the parents breathe life into the children before they leave their own door, and send them to school hungering and thirsting after knowledge.

Now, all these various agencies must work in concert, or they work in vain. When a system is so numerous in its parts, and so complex in its structure ; when the nice adjustment of each and the harmonious working of all are necessary to the perfection of the product, — all who are engaged in its operation must not only have a great extent of knowledge, but they must be bound together by a unity of purpose. Experience has often proved how fatally powerful one ill-disposed person can be in destroying the value of a school ; but experience is yet to prove what an amount of corporeal and material well-being, of social enjoyment, of intellectual dominion and majesty, of moral purity and fervor, what an amount, in fine, of both temporal and spiritual blessedness, this institution, in the providence of God, may be the means of conferring upon the race.

Experience is yet to develop the grandeur and the glory, which, through the exhaustless capabilities of this institution, may be wrought out for mankind, when, by the united labors of the wise and the good, its elastic nature shall be so expanded as to become capacious of the millions of immortal beings, who, from the recesses of Infinite Power, are evoked into this life as a place of preparation for a higher state of existence, and whom, like a nursing mother, it shall receive and cherish, and shall instruct and train in the knowledge and the observance and the love of those divine laws and commandments upon which the Creator, both of the body and the soul, has made their highest happiness to depend.

## REPORT FOR 1841.

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GENTLEMEN, —

. . . THE declination of the sun towards the southern tropic is not more certainly followed by winter, with all its blankness and sterility, nor does the ascension of that luminary towards our own part of the heavens more certainly bring on summer, with all its beauty and abundance, than does the want or the enjoyment of education degrade or elevate the condition of a people. I will occupy the short space which propriety allows to me, in concluding this Report, by showing the effect of education upon *the worldly fortunes and estates* of men, — its influence upon property, upon human comfort and competence, upon the outward, visible, material interests or well-being of individuals and communities.

This view, so far from being the highest which can be taken of the beneficent influences of education, may, perhaps, be justly regarded as the lowest. But it is a palpable view. It presents an aspect of the subject susceptible of being made intelligible to all; and, therefore, it will meet the case of thousands who are now indifferent about the education of their offspring, because they foresee no re-imbursement in kind, no return in money, or in money's worth, for money expended. The co-operation of this numerous class is indispensable, in order to carry out the system; and if they can be induced to educate their children, even from inferior motives, the children, when educated, will feel its higher and nobler affinities.

So, too, in regard to towns. If it can be proved that the aggregate wealth of a town will be increased just in proportion to the increase of its appropriations for schools, the opponents of such a measure will be silenced. The tax for this purpose, which they now look upon as a burden, they will then regard as a profitable investment. Let it be shown that the money which is now clung to by the parent, in the hope of increasing his children's legacies some six or ten per cent. can be so invested as to double their patrimony, and the blind instinct of parental love, which now, by voice and vote, opposes such outlay, will become an advocate for the most generous endowments. When the money expended for education shall be viewed in its true character, as seed-grain sown in a soil which is itself enriched by yielding, then the most parsimonious will not stint the sowing, lest the harvest also should be stinted, and thereby thirty, sixty, or a hundred fold should be lost to the garnerers.

I am the more induced to take this view of the subject, because the advocates and eulogists of education have rarely, if ever, descended to so humble a duty as to demonstrate its pecuniary value both to individuals and to society. They have expended their strength in portraying its loftier attributes, its gladdening, refining, humanizing tendencies. They have not deigned to show how it can raise more abundant harvests, and multiply the conveniences of domestic life; how it can build, transport, manufacture, mine, navigate, fortify; how, in fine, a single new idea is often worth more to an individual than a hundred workmen, and to a nation than the addition of provinces to its territory. I have novel and striking evidence to prove that education is convertible into houses and lands, as well as into power and virtue.

Although, therefore, this utilitarian view of education, as it may be called, which regards it as the dispenser of private competence, and the promoter of national wealth, is by no means the first which would address itself to an enlightened and benevolent mind, yet it will be found to possess intrinsic



merits, and to be worthy of the special regard, not only of the political economist, but of the lawgiver and moralist. Nature fastens upon us original and inexorable necessities in regard to food, raiment, and shelter. Though these physical wants are among the lowest that belong to our being, yet there is a view of them which is not sordid or ignoble. They must be first served, because, if denied, forthwith the race is extinct. They domineer over us; and, until supplied, their importunate clamor will drown every appeal to higher capacities. No hungry or houseless people ever were, or ever will be, an intelligent or a moral one. It is found that the church, the lecture-room, and the hall of science, flourish best where regard is paid to the institution for savings. The divine charities of Christian love are often straitened, because our means of benevolence fall short of our desires.

I proceed, then, to show that education has a power of ministering to our personal and material wants beyond all other agencies, whether excellence of climate, spontaneity of production, mineral resources, or mines of silver and gold. Every wise parent and community, desiring the prosperity of their children, even in the most worldly sense, will spare no pains in giving them a generous education.

During the past year, I have opened a correspondence, and availed myself of all opportunities to hold personal interviews, with many of the most practical, sagacious, and intelligent business-men amongst us, who for many years have had large numbers of persons in their employment. My object has been to ascertain the difference in the productive ability — where natural capacities have been equal — between the educated and the uneducated; between a man or woman whose mind has been awakened to thought and supplied with the rudiments of knowledge by a good common-school education and one whose faculties have never been developed, or aided in emerging from their original darkness and torpor, by such a privilege. For this purpose I have conferred and corresponded with manufacturers of all kinds, with machinists, engineers, railroad

contractors, officers in the army, &c. These various classes of persons have means of determining the effects of education on individuals, equal in their natural abilities, which other classes do not possess. A farmer hiring a laborer for one season, who has received a good common-school education, and, the ensuing season, hiring another who has not enjoyed this advantage, although he may be personally convinced of the relative value or profitableness of their services, will rarely have any exact data or tests to refer to by which he can measure the superiority of the former over the latter. They do not work side by side, so that he can institute a comparison between the amounts of labor they perform. They may cultivate different fields, where the ease of tillage or the fertility of the soils may be different. They may rear crops under the influence of different seasons, so that he cannot discriminate between what is referable to the bounty of Nature, and what to superiority in judgment or skill. Similar difficulties exist in estimating the amount and value of female labor in the household. And as to the mechanic also, the carpenter, the mason, the blacksmith, the tool-maker of any kind, there are a thousand circumstances which we call accidental, that mingle their influences in giving quality and durability to their work, and prevent us from making a precise estimate of the relative value of any two men's handicraft. Individual differences too, in regard to a single article, or a single day's work, may be too minute to be noticed or appreciated, while the aggregate of these differences at the end of a few years may make all the difference between a poor and a rich man. No observing man can have failed to notice the difference between two workmen, one of whom — to use a proverbial expression — always hits the nail on the head, while the other loses half his strength, and destroys half his nails, by the awkwardness of his blows; but perhaps few men have thought of the difference in the results of two such men's labor at the end of twenty years.

But when hundreds of men or women work side by side, in

the same factory, at the same machinery, in making the same fabrics, and, by a fixed rule of the establishment, labor the same number of hours each day; and when, also, the products of each operative can be counted in number, weighed by the pound, or measured by the yard or cubic foot, — then it is perfectly practicable to determine with arithmetical exactness the productions of one individual and one class as compared with those of another individual and another class.

So where there are different kinds of labor, some simple, others complicated, and, of course, requiring different degrees of intelligence and skill, it is easy to observe what class of persons rise from a lower to a higher grade of employment.

This, too, is not to be forgotten, — that in a manufacturing or mechanical establishment, or among a set of hands engaged in filling up a valley or cutting down a hill, where scores of people are working together, the absurd and adventitious distinctions of society do not intrude. The capitalist and his agents are looking for the greatest amount of labor, or the largest income in money from their investments; and they do not promote a dunce to a station where he will destroy raw material, or slacken industry, because of his name or birth or family connections. The obscurest and humblest person has an open and fair field for competition. That he proves himself capable of earning more money for his employer is a testimonial better than a diploma from all the colleges.

Now, many of the most intelligent and valuable men in our community, in compliance with my request, — for which I tender them my public and grateful acknowledgments, — have examined their books for a series of years, and have ascertained both the quality and the amount of work performed by persons in their employment; and the result of the investigation is a most astonishing superiority, in productive power, on the part of the educated over the uneducated laborer. The hand is found to be another hand when guided by an intelligent mind. Processes are performed, not only more rapidly, but better, when faculties which have been exercised in early life

furnish their assistance. Individuals who, without the aid of knowledge, would have been condemned to perpetual inferiority of condition, and subjected to all the evils of want and poverty, rise to competence and independence by the uplifting power of education. In great establishments, and among large bodies of laboring men, where all services are rated according to their pecuniary value; where there are no extrinsic circumstances to bind a man down to a fixed position, after he has shown a capacity to rise above it; where, indeed, men pass by each other, ascending or descending in their grades of labor, just as easily and certainly as particles of water of different degrees of temperature glide by each other, — there it is found as an almost invariable fact, other things being equal, that those who have been blessed with a good common-school education rise to a higher and a higher point in the kinds of labor performed, and also in the rate of wages paid, while the ignorant sink like dregs, and are always found at the bottom.

I now proceed to lay before the Board some portions of the evidence I have obtained, first inserting my Circular Letter, in answer to which, communications have been made.

#### CIRCULAR LETTER.

To — — —.

DEAR SIR, — My best and only apology for taking the liberty to address you will be found in the object I have in view, which, therefore, I proceed to state without further preface.

In fulfilling the duties with which I have been intrusted by the Board of Education, I am led into frequent conversation and correspondence, not only with persons in every part of the State, but more or less with every class and description of persons in the whole community.

I regret to say, that among these I occasionally meet with individuals, who, although very differently circumstanced in life, cordially agree in their indifference towards the cause of common education; and some of whom even profess to be alarmed at possible mischiefs that may come in its train, and therefore stand in its path, and obstruct its advancement.

The individuals who thus maintain an attitude of neutrality, or assume one of active opposition, are either persons who, in their worldly circumstances, are deemed the favorites of fortune, or they are persons who are

alike strangers to mental cultivation, and to all the outward and ordinary signs of temporal prosperity. In a word, they are found, in regard to their worldly condition, at the two extremes of the social scale. I would by no means be understood to say, that any considerable proportion of the men of wealth amongst us look with an unfriendly eye on the general diffusion of the means of knowledge. On the contrary, some of the best friends of education are to be found amongst this class, who, uniting abundance of means with benevolence of disposition, are truly efficient in advancing the work. Nor, on this subject, are the lines of demarcation between parties broadly drawn; but they shade off, by imperceptible degrees, from friends to opponents.

But this I do mean to say, that there are men of wealth and leisure, too numerous to be overlooked in a calculation of friendly and of adverse agencies, who profess to fear that a more thorough and comprehensive education for the whole people will destroy contentment, loosen habits of industry, engender a false ambition, and prompt to an incursion into their own favored sphere, by which great loss will accrue to themselves, without any corresponding benefit to the invaders.

The other class are those who, suffering from a neglected or a perverted education in themselves, seem incapable of appreciating either the temporal and material well-being, or the mental elevation and enjoyment, which it is the prerogative of a good education to confer. These two parties, though alien from each other in all other respects, are allies here; and although, with the exception of a very few towns in the Commonwealth, they are not numerically strong, yet, by adroitly implicating other questions with that of the Public Schools, they are able in many cases to baffle all efforts at reform and improvement.

The views of these parties I believe to be radically wrong, anti-social, anti-Republican, anti-Christian; and I believe that all action in pursuance of them will impair the best interests of society, and originate a train of calamities, in which not only their advocates, but all portions of the community, will be involved. Convinced that such is the inevitable and accelerating tendency of such views, it seems to me to be the duty of the friends of mankind to meet them with fairness and a conciliatory spirit indeed, but with earnestness and energy, and to confute them by the production of evidence and the exposition of principles.

It is for this reason that I address you, and solicit a reply, founded upon your personal knowledge, to the following questions:—

First,—Have you had large numbers of persons in your employment or under your superintendence? If so, will you please to state how many? Within what period of time? In what department of business? Whether at different places? Whether natives or foreigners?

Second,—Have you observed differences among the persons you have employed, growing out of differences in their education, and independent of

*their natural abilities*; that is, whether, as a class, those who from early life have been accustomed to exercise their minds by reading and studying have greater docility and quickness in applying themselves to work? and, after the simplest details are mastered, have they greater aptitude, dexterity, or ingenuity in comprehending ordinary processes, or in originating new ones? Do they more readily or frequently devise new modes by which the same amount of work can be better done, or by which more work can be done in the same time, or by which raw material or motive-power can be economized? In short, do you obtain more work and better work, with less waste, from those who have received what, in Massachusetts, we call a good common-school education, or from those who have grown up in neglect and ignorance? Is there any difference in the earnings of these two classes, and consequently in their wages?

Third, — What, within your knowledge, has been the effect of higher degrees of mental application and culture upon the domestic and social habits of persons in your employment? Is this class more cleanly in their persons, their dress, and their households? and do they enjoy a greater immunity from those diseases which originate in a want of personal neatness and purity? Are they more exemplary in their deportment and conversation, devoting more time to intellectual pursuits or to the refining art of music, and spending their evenings and leisure hours more with their families, and less at places of resort for idle and dissipated men? Is a smaller portion of them addicted to intemperance? Are their houses kept in a superior condition? Does a more economical and judicious mode of living purchase greater comforts at the same expense, or equal comforts with less means? Are their families better brought up, more respectably dressed, more regularly attendant upon the school and the church? and do their children, when arrived at years of maturity, enter upon the active scenes of life with better prospects of success?

Fourth, — In regard to standing and respectability among co-laborers, neighbors, and fellow-citizens generally, how do those who have enjoyed and improved the privilege of good common schools compare with the neglected and the illiterate? Do the former exercise greater influence among their associates? Are they more often applied to for advice and counsel in cases of difficulty, or selected as umpires or arbitrators for the decision of minor controversies? Are higher and more intelligent circles for acquaintance open to them, from conversation and intercourse with which their own minds can be constantly improved? Are they more likely to rise from grade to grade in the scale of labor, until they enter departments where greater skill, judgment, and responsibility are required, and which therefore command a larger remuneration? Are they more likely to rise from the condition of employes, and to establish themselves in business on their own account?

Fifth, — Have you observed any difference in the classes above named

(I speak of them as classes, for there will, of course, be individual exceptions) in regard to punctuality and fidelity in the performance of duties? Which class is most regardful of the rights of others, and most intelligent and successful in securing their own? You will, of course, perceive that this question involves a more general one; viz., from which of the above-described classes have those who possess property, and who hope to transmit it to their children, most to fear from secret aggression, or from such public degeneracy as will loosen the bands of society, corrupt the testimony of witnesses, violate the sanctity of the juror's oath, and substitute, as a rule of right, the power of a numerical majority for the unvarying principles of justice?

Sixth, — Finally, in regard to those who possess the largest shares in the stock of worldly goods, could there, in your opinion, be any police so vigilant and effective, for the protection of all the rights of person, property, and character, as such a sound and comprehensive education and training as our system of common schools could be made to impart? and would not the payment of a sufficient tax to make such education and training universal be the cheapest means of self-protection and insurance? And in regard to that class which, from the accident of birth and parentage, are subjected to the privations and the temptations of poverty, would not such an education open to them new resources in habits of industry and economy, in increased skill, and the awakening of inventive power, which would yield returns a thousand-fold greater than can ever be hoped for from the most successful clandestine depredations, or open invasion of the property of others?

I am aware, my dear sir, that, to every intelligent and reflecting man, these inquiries will seem superfluous and nugatory; and your first impulse may be to put some such interrogatory to me in reply, as whether the sun has any influence on vegetable growth, or whether it is expedient to have windows in our houses for the admission of light. I acknowledge the close analogy of the cases in point of self-evidence; but my reply is, that while we have influential persons, who dwell with us in the same common mansion of society, and who, having secured for themselves a few well-lighted apartments, now insist that total darkness is better for a portion of the occupants born and dwelling under the same roof; and while, unfortunately, a portion of these benighted occupants, from never having seen more than the feeblest glimmerings of the light of day, insist that it is better for them and their children to remain blind; while these opinions continue to exist, I hold that it is necessary to adduce facts and arguments, and to present motives, which shall prove, both to the blinded and those who would keep them so, the value and beauty of light.

HORACE MANN,

*Secretary of the Board of Education*

P. S. If the above shall give you a general outline of my object, I would thank you to fill it up, even though parts of it may not be distinctly indicated by the questions.

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## LETTER FROM J. K. MILLS, Esq.

BOSTON, Dec. 29, 1841.

MY DEAR SIR,—I have endeavored, since I received your letter, to collect such information as would enable me to answer your questions. The house with which I am connected in business has had, for the last ten years, the principal direction of cotton-mills, machine-shops, and calico-printing works, in which are constantly employed about three thousand persons. The opinions I have formed of the effects of a common-school education upon our manufacturing population are the result of personal observation and inquiries, and are confirmed by the testimony of the overseers and agents, who are brought into immediate contact with the operatives. They are as follows :—

1. — That the rudiments of a common-school education are essential to the attainment of skill and expertness as laborers, or to consideration and respect in the civil and social relations of life.

2. — That very few, who have not enjoyed the advantages of a common-school education, ever rise above the lowest class of operatives ; and that the labor of this class, when it is employed in manufacturing operations, which require even a very moderate degree of manual or mental dexterity, is unproductive.

3. — That a large majority of the overseers, and others employed in situations which require a high degree of skill, in particular branches, which often-times require a good general knowledge of business, and *always* an unexceptionable moral character, have made their way up from the condition of common laborers with no other advantage over a large proportion of those they have left behind than that derived from a better education.

A statement made from the books of one of the manufacturing companies under our direction will show the relative number of the two classes, and the earnings of each. This will may be taken as a fair index of all the others.

The average number of operatives annually employed for the last three years is one thousand two hundred. Of this number, there are forty-five unable to write their names, or about three-fourths per cent.

The average of women's wages, in the departments requiring the most skill, is \$2.50 per week, exclusive of board.

The average of wages in the lowest departments is \$1.25 per week.

Of the forty-five who are unable to write, twenty-nine, or about two-



thirds, are employed in the lowest department. The difference between the wages earned by the forty-five, and the average wages of an equal number of the better-educated class, is about twenty-seven per cent in favor of the latter.

The difference between the wages earned by twenty-nine of the lowest class, and the same number in the higher, is sixty-six per cent.

Of seventeen persons filling the most responsible situations in the mill, ten have grown up in the establishment from common laborers or apprentices.

This statement does not include an importation of sixty-three persons from Manchester, in England, in 1839. Among these persons, there was scarcely one who could read or write; and although a part of them had been accustomed to work in cotton-mills, yet, either from incapacity or idleness, they were unable to earn sufficient to pay for their subsistence, and at the expiration of a few weeks not more than half a dozen remained in our employment.

In some of the print-works, a large proportion of the operatives are foreigners. Those who are employed in the branches which require a considerable degree of skill are as well educated as our people in similar situations. But the common laborers, as a class, are without any education; and their average earnings are about two-thirds only of those of our lowest classes, although the prices paid to each are the same for the same amount of work.

Among the men and boys employed in our machine-shops, the want of education is quite rare; indeed, I do not know an instance of a person who is unable to read and write, and many have had a good common-school education. To this may be attributed the fact, that a large proportion of persons who fill the higher and more responsible situations came from this class of workmen.

From these statements, you will be able to form some estimate, in dollars and cents at least, of the advantages even of a little education to the operative; and there is not the least doubt that the employer is equally benefited. He has the security for his property that intelligence, good morals, and a just appreciation of the regulations of his establishment, always afford. His machinery and mills, which constitute a large part of his capital, are in the hands of persons, who, by their skill, are enabled to use them to their utmost capacity, and to prevent any unnecessary depreciation.

Each operative in a cotton-mill may be supposed to represent from one thousand to twelve hundred dollars of the capital invested in the mill and its machinery. It is only from the most diligent and economical use of this capital that the proprietor can expect a profit. A fraction less than one-half of the cost of manufacturing common cotton-goods, when a mill is in full operation, is made up of charges which are permanent. If the product is reduced in the ratio of the capacity of the two classes of operatives mentioned in this statement, it will be seen that the cost will be increased in a compound ratio.

My belief is, that the best cotton-mill in New England, with such operatives only as the forty-five mentioned above, who are unable to write their names, would never yield the proprietor a profit; that the machinery would soon be worn out, and he would be left, in a short time, with a population no better than that which is represented, as I suppose, very fairly, by the importation from England.

I cannot imagine any situation in life where the want of a common-school education would be more severely felt, or be attended with worse consequences, than in our manufacturing villages; nor, on the other hand, is there any place where such advantages can be improved with greater benefit to all parties.

There is more excitement and activity in the minds of people living in masses, and, if this expends itself in any of the thousand vicious indulgences with which they are sure to be tempted, the road to destruction is travelled over with a speed exactly corresponding to the power employed.

Very truly yours,

JAMES K. MILLS.

HON. HORACE MANN.

LETTER FROM H. BARTLETT, Esq.

LOWELL, Dec. 1, 1841.

HON. HORACE MANN.

*Dear Sir,*—In replying to your interrogatories, respecting the effect of education upon the laboring classes, I might be very brief; but the subject is one in which I feel so deep an interest, that I propose to go a little into detail, and hope to do so without being tedious.

I have been engaged for nearly ten years in manufacturing, and have had the constant charge of from four hundred to nine hundred persons during that time. The greater part of them have been Americans; but there have always been more or less foreigners. During this time, I have had charge of two different establishments in different parts of the State.

In answering your second interrogatory, I can say, that I have come in contact with a very great variety of character and disposition, and have seen mind applied to production in the Mechanic and Manufacturing Arts, possessing different degrees of intelligence, from gross ignorance to a high degree of cultivation; and I have no hesitation in affirming that I have found the best educated to be the most profitable help; even those females who merely tend machinery give a result somewhat in proportion to the advantages enjoyed in early life for education,—those who have a good common-school education giving, as a class, invariably, a better production than those brought up in ignorance.

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The individuals who thus maintain an attitude of neutrality, or assume one of active opposition, are either persons who, in their worldly circumstances, are deemed the favorites of fortune, or they are persons who are

alike strangers to mental cultivation, and to all the outward and ordinary signs of temporal prosperity. In a word, they are found, in regard to their worldly condition, at the two extremes of the social scale. I would by no means be understood to say, that any considerable proportion of the men of wealth amongst us look with an unfriendly eye on the general diffusion of the means of knowledge. On the contrary, some of the best friends of education are to be found amongst this class, who, uniting abundance of means with benevolence of disposition, are truly efficient in advancing the work. Nor, on this subject, are the lines of demarcation between parties broadly drawn; but they shade off, by imperceptible degrees, from friends to opponents.

But this I do mean to say, that there are men of wealth and leisure, too numerous to be overlooked in a calculation of friendly and of adverse agencies, who profess to fear that a more thorough and comprehensive education for the whole people will destroy contentment, loosen habits of industry, engender a false ambition, and prompt to an incursion into their own favored sphere, by which great loss will accrue to themselves, without any corresponding benefit to the invaders.

The other class are those who, suffering from a neglected or a perverted education in themselves, seem incapable of appreciating either the temporal and material well-being, or the mental elevation and enjoyment, which it is the prerogative of a good education to confer. These two parties, though alien from each other in all other respects, are allies here; and although, with the exception of a very few towns in the Commonwealth, they are not numerically strong, yet, by adroitly implicating other questions with that of the Public Schools, they are able in many cases to baffle all efforts at reform and improvement.

The views of these parties I believe to be radically wrong, anti-social, anti-Republican, anti-Christian; and I believe that all action in pursuance of them will impair the best interests of society, and originate a train of calamities, in which not only their advocates, but all portions of the community, will be involved. Convinced that such is the inevitable and accelerating tendency of such views, it seems to me to be the duty of the friends of mankind to meet them with fairness and a conciliatory spirit indeed, but with earnestness and energy, and to confute them by the production of evidence and the exposition of principles.

It is for this reason that I address you, and solicit a reply, founded upon your personal knowledge, to the following questions:—

First, — Have you had large numbers of persons in your employment or under your superintendence? If so, will you please to state how many? Within what period of time? In what department of business? Whether at different places? Whether natives or foreigners?

Second, — Have you observed differences among the persons you have employed, growing out of differences in their education, and independent of

*their natural abilities*; that is, whether, as a class, those who from early life have been accustomed to exercise their minds by reading and studying have greater docility and quickness in applying themselves to work? and, after the simplest details are mastered, have they greater aptitude, dexterity, or ingenuity in comprehending ordinary processes, or in originating new ones? Do they more readily or frequently devise new modes by which the same amount of work can be better done, or by which more work can be done in the same time, or by which raw material or motive-power can be economized? In short, do you obtain more work and better work, with less waste, from those who have received what, in Massachusetts, we call a good common-school education, or from those who have grown up in neglect and ignorance? Is there any difference in the earnings of these two classes, and consequently in their wages?

Third, — What, within your knowledge, has been the effect of higher degrees of mental application and culture upon the domestic and social habits of persons in your employment? Is this class more cleanly in their persons, their dress, and their households? and do they enjoy a greater immunity from those diseases which originate in a want of personal neatness and purity? Are they more exemplary in their deportment and conversation, devoting more time to intellectual pursuits or to the refining art of music, and spending their evenings and leisure hours more with their families, and less at places of resort for idle and dissipated men? Is a smaller portion of them addicted to intemperance? Are their houses kept in a superior condition? Does a more economical and judicious mode of living purchase greater comforts at the same expense, or equal comforts with less means? Are their families better brought up, more respectably dressed, more regularly attendant upon the school and the church? and do their children, when arrived at years of maturity, enter upon the active scenes of life with better prospects of success?

Fourth, — In regard to standing and respectability among co-laborers, neighbors, and fellow-citizens generally, how do those who have enjoyed and improved the privilege of good common schools compare with the neglected and the illiterate? Do the former exercise greater influence among their associates? Are they more often applied to for advice and counsel in cases of difficulty, or selected as umpires or arbitrators for the decision of minor controversies? Are higher and more intelligent circles for acquaintance open to them, from conversation and intercourse with which their own minds can be constantly improved? Are they more likely to rise from grade to grade in the scale of labor, until they enter departments where greater skill, judgment, and responsibility are required, and which therefore command a larger remuneration? Are they more likely to rise from the condition of employes, and to establish themselves in business on their own account?

Fifth, — Have you observed any difference in the classes above named



(I speak of them as classes, for there will, of course, be individual exceptions) in regard to punctuality and fidelity in the performance of duties? Which class is most regardful of the rights of others, and most intelligent and successful in securing their own? You will, of course, perceive that this question involves a more general one; viz., from which of the above-described classes have those who possess property, and who hope to transmit it to their children, most to fear from secret aggression, or from such public degeneracy as will loosen the bands of society, corrupt the testimony of witnesses, violate the sanctity of the juror's oath, and substitute, as a rule of right, the power of a numerical majority for the unvarying principles of justice?

Sixth, — Finally, in regard to those who possess the largest shares in the stock of worldly goods, could there, in your opinion, be any police so vigilant and effective, for the protection of all the rights of person, property, and character, as such a sound and comprehensive education and training as our system of common schools could be made to impart? and would not the payment of a sufficient tax to make such education and training universal be the cheapest means of self-protection and insurance? And in regard to that class which, from the accident of birth and parentage, are subjected to the privations and the temptations of poverty, would not such an education open to them new resources in habits of industry and economy, in increased skill, and the awakening of inventive power, which would yield returns a thousand-fold greater than can ever be hoped for from the most successful clandestine depredations, or open invasion of the property of others?

I am aware, my dear sir, that, to every intelligent and reflecting man, these inquiries will seem superfluous and nugatory; and your first impulse may be to put some such interrogatory to me in reply, as whether the sun has any influence on vegetable growth, or whether it is expedient to have windows in our houses for the admission of light. I acknowledge the close analogy of the cases in point of self-evidence; but my reply is, that while we have influential persons, who dwell with us in the same common mansion of society, and who, having secured for themselves a few well-lighted apartments, now insist that total darkness is better for a portion of the occupants born and dwelling under the same roof; and while, unfortunately, a portion of these benighted occupants, from never having seen more than the feeblest glimmerings of the light of day, insist that it is better for them and their children to remain blind; while these opinions continue to exist, I hold that it is necessary to adduce facts and arguments, and to present motives, which shall prove, both to the blinded and those who would keep them so, the value and beauty of light.

HORACE MANN,

*Secretary of the Board of Education*

P. S. If the above shall give you a general outline of my object, I would thank you to fill it up, even though parts of it may not be distinctly indicated by the questions.

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## LETTER FROM J. K. MILLS, Esq.

BOSTON, Dec. 29, 1841.

MY DEAR SIR,—I have endeavored, since I received your letter, to collect such information as would enable me to answer your questions. The house with which I am connected in business has had, for the last ten years, the principal direction of cotton-mills, machine-shops, and calico-printing works, in which are constantly employed about three thousand persons. The opinions I have formed of the effects of a common-school education upon our manufacturing population are the result of personal observation and inquiries, and are confirmed by the testimony of the overseers and agents, who are brought into immediate contact with the operatives. They are as follows :—

1.—That the rudiments of a common-school education are essential to the attainment of skill and expertness as laborers, or to consideration and respect in the civil and social relations of life.

2.—That very few, who have not enjoyed the advantages of a common-school education, ever rise above the lowest class of operatives; and that the labor of this class, when it is employed in manufacturing operations, which require even a very moderate degree of manual or mental dexterity, is unproductive.

3.—That a large majority of the overseers, and others employed in situations which require a high degree of skill, in particular branches, which often-times require a good general knowledge of business, and *always* an unexceptionable moral character, have made their way up from the condition of common laborers with no other advantage over a large proportion of those, they have left behind than that derived from a better education.

A statement made from the books of one of the manufacturing companies under our direction will show the relative number of the two classes, and the earnings of each. This mill may be taken as a fair index of all the others.

The average number of operatives annually employed for the last three years is one thousand two hundred. Of this number, there are forty-five unable to write their names, or about three-fourths per cent.

The average of women's wages, in the departments requiring the most skill, is \$2.50 per week, exclusive of board.

The average of wages in the lowest departments is \$1.25 per week.

Of the forty-five who are unable to write, twenty-nine, or about two-

thirds, are employed in the lowest department. The difference between the wages earned by the forty-five, and the average wages of an equal number of the better-educated class, is about twenty-seven per cent in favor of the latter.

The difference between the wages earned by twenty-nine of the lowest class, and the same number in the higher, is sixty-six per cent.

Of seventeen persons filling the most responsible situations in the mill, ten have grown up in the establishment from common laborers or apprentices.

This statement does not include an importation of sixty-three persons from Manchester, in England, in 1839. Among these persons, there was scarcely one who could read or write; and although a part of them had been accustomed to work in cotton-mills, yet, either from incapacity or idleness, they were unable to earn sufficient to pay for their subsistence, and at the expiration of a few weeks not more than half a dozen remained in our employment.

In some of the print-works, a large proportion of the operatives are foreigners. Those who are employed in the branches which require a considerable degree of skill are as well educated as our people in similar situations. But the common laborers, as a class, are without any education; and their average earnings are about two-thirds only of those of our lowest classes, although the prices paid to each are the same for the same amount of work.

Among the men and boys employed in our machine-shops, the want of education is quite rare; indeed, I do not know an instance of a person who is unable to read and write, and many have had a good common-school education. To this may be attributed the fact, that a large proportion of persons who fill the higher and more responsible situations came from this class of workmen.

From these statements, you will be able to form some estimate, in dollars and cents at least, of the advantages even of a little education to the operative; and there is not the least doubt that the employer is equally benefited. He has the security for his property that intelligence, good morals, and a just appreciation of the regulations of his establishment, always afford. His machinery and mills, which constitute a large part of his capital, are in the hands of persons, who, by their skill, are enabled to use them to their utmost capacity, and to prevent any unnecessary depreciation.

Each operative in a cotton-mill may be supposed to represent from one thousand to twelve hundred dollars of the capital invested in the mill and its machinery. It is only from the most diligent and economical use of this capital that the proprietor can expect a profit. A fraction less than one-half of the cost of manufacturing common cotton-goods, when a mill is in full operation, is made up of charges which are permanent. If the product is reduced in the ratio of the capacity of the two classes of operatives mentioned in this statement, it will be seen that the cost will be increased in a compound ratio.

My belief is, that the best cotton-mill in New England, with such operatives only as the forty-five mentioned above, who are unable to write their names, would never yield the proprietor a profit; that the machinery would soon be worn out, and he would be left, in a short time, with a population no better than that which is represented, as I suppose, very fairly, by the importation from England.

I cannot imagine any situation in life where the want of a common-school education would be more severely felt, or be attended with worse consequences, than in our manufacturing villages; nor, on the other hand, is there any place where such advantages can be improved with greater benefit to all parties.

There is more excitement and activity in the minds of people living in masses, and, if this expends itself in any of the thousand vicious indulgences with which they are sure to be tempted, the road to destruction is travelled over with a speed exactly corresponding to the power employed.

Very truly yours,

JAMES K. MILLS.

HON. HORACE MANN.

### LETTER FROM H. BARTLETT, Esq.

LOWELL, Dec. 1, 1841.

HON. HORACE MANN.

*Dear Sir,*—In replying to your interrogatories, respecting the effect of education upon the laboring classes, I might be very brief; but the subject is one in which I feel so deep an interest, that I propose to go a little into detail, and hope to do so without being tedious.

I have been engaged for nearly ten years in manufacturing, and have had the constant charge of from four hundred to nine hundred persons during that time. The greater part of them have been Americans; but there have always been more or less foreigners. During this time, I have had charge of two different establishments in different parts of the State.

In answering your second interrogatory, I can say, that I have come in contact with a very great variety of character and disposition, and have seen mind applied to production in the Mechanic and Manufacturing Arts, possessing different degrees of intelligence, from gross ignorance to a high degree of cultivation; and I have no hesitation in affirming that I have found the best educated to be the most profitable help; even those females who merely tend machinery give a result somewhat in proportion to the advantages enjoyed in early life for education,—those who have a good common-school education giving, as a class, invariably, a better production than those brought up in ignorance.

The former make the best wages. If any one should doubt the fact, let him examine the pay-roll of any establishment in New England, and ascertain the character of the girls who get the most money, and he will be satisfied that I am correct. I am equally clear, that, as a class, they do their work better. There are many reasons why it should be so. They have more order and system; they not only keep their persons neater, but their machinery in better condition.

But there are other advantages, besides mere knowledge, growing out of a good common-school education. Such an education is calculated to strengthen the whole system, intellectual, moral, and physical. It educates the whole man or woman, and gives him or her more energy and greater capacity for production in all departments of labor. Minds formed by such an education are superior in the combination and arrangement of what is already known, and more frequently devise new methods of operation.

Your third inquiry relates to the effect of education upon the domestic and social habits of persons in my employ. I have never considered mere knowledge, valuable as it is in itself to the laborer, as the only advantage derived from a good common-school education. I have uniformly found the better educated, as a class, possessing a higher and better state of morals, more orderly and respectful in their deportment, and more ready to comply with the wholesome and necessary regulations of an establishment. And in times of agitation on account of some change in regulations or wages, I have always looked to the most intelligent, best educated, and the most moral, for support, and have seldom been disappointed. For, while they are the last to submit to imposition, they *reason*; and, if your requirements are reasonable, they will generally acquiesce, and exert a salutary influence upon their associates. But the ignorant and uneducated I have generally found the most turbulent and troublesome, acting under the impulse of excited passion and jealousy.

The former appear to have an interest in sustaining good order, while the latter seem more reckless of consequences. And, to my mind, all this is perfectly natural. The better educated have more and stronger attachments binding them to the place where they are. They are generally neater, as I have before said, in their persons, dress, and houses; surrounded with more comforts, with fewer of "the ills which flesh is heir to." In short, I have found the educated, as a class, more cheerful and contented, — devoting a portion of their leisure time to reading and intellectual pursuits, more with their families, and less in scenes of dissipation.

The good effect of all this is seen in the more orderly and comfortable appearance of the whole household, but nowhere more strikingly than in the children. A mother who has had a good common-school education will rarely suffer her children to grow up in ignorance.

As I have said, this class of persons is more quiet, more orderly, and, I may add, more regular in their attendance upon public worship, and more punctual in the performance of all their duties.

Your fourth inquiry refers to the relative stand taken in society by those who have received an early education; and my answers to your inquiries under that head might be inferred from what I have already said. My remarks before have referred quite as much to females as to males, but what I shall say under this will refer particularly to the latter.

I have generally observed individuals exerting an influence among their co-laborers and citizens somewhat in proportion to their education. And, in cases of difficulty and arbitration, the most ignorant have paid an involuntary respect to the value of education by the selection of those who have enjoyed its benefits for the settlement of their controversies.

It would be very difficult, if not impossible, for a young man, who had not an education equal to a good common-school education, to rise from grade to grade, until he should obtain the berth of an Overseer; and in making promotions, as a general thing, it would be unnecessary to make inquiry as to the education of the young men from whom you would select; for their mental cultivation would be sufficiently indicated by their general appearance and standing among their fellows; and, if you had reference to merit and qualifications, very seldom indeed would an uneducated young man rise to "*a better place and better pay.*"

Young men who expect to resort to manufacturing establishments for employment cannot prize too highly a good education. It will give them standing among their associates, and be the means of promotion from their employers.

Your fifth interrogatory refers to difference of moral character in the two classes, and the dangers which society or men of property have to apprehend from the one or the other. I do not know that I can better answer your inquiries under this head than to give you my views of the value, in a *pecuniary* point of view, of education and morality, to the stockholders of our manufacturing establishments. If they have no danger to apprehend from a general diffusion of knowledge among those in their employ; if it is a fact that that class of help which has enjoyed a good common-school education are the most tractable, yielding most readily to reasonable requirements, exerting a salutary and conservative influence in times of excitement, while the most ignorant are the most refractory; then it appears to me that the public at large ought to be satisfied that they have more danger to apprehend from the ignorant than from the well educated. I am aware that there is a feeling to a certain, but I hope limited extent, that knowledge among the great mass is dangerous; that it creates discontent, and tends to insubordination. But I believe the fear to be groundless, and that our danger will come from an opposite source. In my view, there is a connection between education and morals; and I believe that our common schools have been nurseries, not only of learning, but of sound morality; and I trust they will always be surrounded by such influences as will strengthen and confirm the moral principles of our youth; and I am confident, that, so long as that shall be the case, society is safe.

From my observation and experience, I am perfectly satisfied that the owners of manufacturing property have a deep pecuniary interest in the education and morals of their help; and I believe the time is not distant when the truth of this will appear more and more clear. And as competition becomes more close, and small circumstances of more importance in turning the scale in favor of one establishment over another, I believe it will be seen that the establishment, other things being equal, which has the best educated and the most moral help, will give the greatest production at the least cost per pound. So confident am I that production is affected by the intellectual and moral character of help, that whenever a mill or a room should fail to give the proper amount of work, my first inquiry, after that respecting the condition of the machinery, would be, *as to the character of the help*; and if the deficiency remained any great length of time, I am sure I should find many who had made their marks upon the pay-roll, being unable to write their names; and I should be greatly disappointed if I did not, upon inquiry, find a portion of them of irregular habits and suspicious character. My mind has been drawn to this subject for a long time. I have watched its operation, and seen its result, and am satisfied that the pecuniary interest of the owners is promoted by the general diffusion of knowledge and morality among those in their employ.

Lowell is a striking illustration of the truth of my remarks on this subject. Probably no other place has done as much for the education and morality of those engaged in manufacturing. She has twenty-three public schools, fifteen churches; and numerous associations for intellectual improvement; and the result is seen, not only in the orderly and temperate character of the people, but in the great productiveness of the mills. And where, I would ask, is manufacturing stock of more value? If any one doubts the connection between these institutions and the price of stocks, let the former be destroyed, let those lights be extinguished, let ignorance and vice take the place of intelligence and virtue, let the prevailing influence here be against schools and churches; and my opinion is, that the moral character of the people would not decline faster than the price of manufacturing stocks. The founders of this place were clear and far-sighted men; and they put in operation a train of moral influences which has formed and preserved a community distinguished for intelligence, virtue, and great energy of character. Should any owner or manager think otherwise, and surround himself with the ignorant and unprincipled, because for a time he might get them for less wages, I am confident that loss in production would more than keep pace with reduction in pay, — to say nothing of the insecurity of property in the hands of such persons.

In short, in closing my answer to your fifth interrogatory, I consider that "those who possess property, and hope to transmit it to their children," have nothing to fear from the general diffusion of knowledge; that if their rights are ever invaded, or their property rendered insecure, it will be when igno-

rance has corrupted the public mind, and prepared it for the controlling influence of some master-spirit possessing intelligence without principle.

Finally, in answering your sixth and last interrogatory, I remark that "those who possess the greatest share in the stock of worldly goods" are deeply interested in this subject as one of mere insurance; that the most effectual way of making insurance on their property would be to contribute from it enough to sustain an efficient system of common-school education, thereby educating the whole mass of mind, and constituting it a police more effective than peace-officers or prisons. By so doing they would bestow a benefaction upon "that class, who, from the accident of birth or parentage, are subjected to the privations and temptations of poverty," and would do much to remove the prejudice and to strengthen the bands of union between the different and extreme portions of society. The great majority always have been, and probably always will be, comparatively poor, while a few will possess the greatest share of this world's goods. And it is a wise provision of Providence which connects so intimately, and as I think so indissolubly, the greatest good of the many with the highest interest of the few.

Yours very respectfully and truly,

H. BARTLETT.

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#### LETTER FROM J. CLARK, Esq.

LOWELL, Dec. 3, 1841.

DEAR SIR,—I owe you an apology for not having made an earlier reply to your inquiries respecting the influences of education upon the character and conduct of our operatives. I have to plead in excuse for my neglect an unusual press of business, which has almost literally occupied every moment of my time; and, while I was seeking a leisure hour to devote to this purpose, my friend, Mr. Bartlett, has kindly allowed me to read the very full and particular answers prepared by him to your several interrogatories.

. . . We have in our mills about one hundred and fifty females who have, at some time, been engaged in *teaching schools*. Many of them teach during the summer months, and work in the mills in winter. The average wages of these ex-teachers I find to be seventeen and three-fourths per cent *above the general average of our mills, and about forty per cent above the wages of the twenty-six who cannot write their names*. It may be said that they are generally employed in the higher departments, where the pay is better. This is true; but this again may be, in most cases, fairly attributed to their better education, which brings us to the same result. If I had included in my calculations the remaining fourteen of the forty, who are mostly



sweepers and scrubbers, and who are paid by the day, the contrasts would have been still more striking ; but having no well-educated females engaged in this department with whom to compare them, I have omitted them altogether. In arriving at the above results, I have considered the *net wages* merely, — the price of board being in all cases the same. I do not consider these results as either extraordinary or surprising, but as a part only of the legitimate and proper fruits of a better cultivation and fuller development of the intellectual and moral powers.

Yours very respectfully,

JOHN CLARK,

*Superintendent of Merrimack Mills.*

HON. HORACE MANN, BOSTON.

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*Extracts from a Letter of Jonathan Crane, Esq., for several years a large Contractor on the Railroads in Massachusetts.*

My principal business, for about ten years past, has been grading railroads. During that time, the number of men employed has varied from fifty to three hundred and fifty, nearly all Irishmen, with the exception of superintendents. Some facts have been so apparent, that my superintendents and myself could not but notice them : these I will freely give you. I should say that not less than three thousand different men have been, more or less, in my employment during the before-mentioned period, and that the number that could read and write intelligibly was about one to eight. Independently of their natural endowments, those who could read and write, and had some knowledge of the first principles of arithmetic, have almost invariably manifested a readiness to apprehend what was required of them, and skill in performing it, and have more readily and frequently devised new modes by which the same amount of work could be better done. Some of these men we have selected for superintendents, and they are now contractors. With regard to the morals of the two classes, we have seen very little difference ; but the better-educated class are more cleanly in their persons and their households, and generally discover more refinement in their manners, and practise a more economical mode in their living. Their families are better brought up, and they are more anxious to send their children to school. In regard to their standing and respectability among co-laborers, neighbors, and fellow-citizens, the more educated are much more respected ; and in settling minor controversies, they are more commonly applied to as arbitrators. With regard to the morals of the two classes before mentioned, permit me to remark, that it furnishes an illustration of the truth of a common saying, that merely cultivating the understanding, without improving the heart, does not make a man better. The more extensively

knowledge and virtue prevail in our country, the greater security have we that our institutions will not be overthrown. Our common-school system, connected as it is, or ought to be, with the inculcation of sound and practical morality, is the most vigilant and efficient police for the protection of persons, property, and character, that could be devised; and is it not gratifying that men of wealth are beginning to see, that, if they would protect their property and persons, a portion of that property should be expended for the education of the poorer classes? Merely selfish considerations would lead any man of wealth to do this, if he would only view the subject in its true light. Nowhere is this subject better understood than in Massachusetts; and the free discussions which have of late been held, in county and town meetings, have had the effect to call the attention of the public to it; and I trust the time is not far distant, when, at least in Massachusetts, the *common-school system* will accomplish all the good which it is capable of producing. Why do we not in these United States have a revolution, almost annually, as in the republics of South America? Ignorance and vice always have invited, and always will invite, such characters as Shakspeare's Jack Cade to rule over them. And may we not feel an assurance, that in proportion as the nation shall recover from the baneful influence of intemperance, so will its attention be directed pre-eminently to the promotion of virtue and knowledge, and nowhere in our country will an incompetent or intemperate common-school teacher be intrusted with the education of our children?

These are a fair specimen, and no more than a fair specimen, of a mass of facts which I have obtained from the most authentic sources. They seem to prove incontestably that education is not only a moral renovator, and a multiplier of intellectual power, but that it is also the most prolific parent of material riches. It has a right, therefore, not only to be included in the grand inventory of a nation's resources, but to be placed at the very head of that inventory. It is not only the most honest and honorable, but the surest means of amassing property. A trespasser or a knave may forcibly or fraudulently appropriate the earnings of others to himself; but education has the prerogative of originating or generating property more certainly and more rapidly than it was ever accumulated by force or fraud. It has more than the quality of an ordinary mercantile commodity, from which the possessor realizes but a single profit as it passes through his hands: it rather resembles

fixed capital, yielding constant and high revenues. As it enjoys an immunity from common casualties, it incurs no cost for insurance or defence. It is above the reach of changes in administration or in administrative policy; and it is free from those fluctuations of trade which agitate the market, and make it so frequent an occurrence that a merchant who goes to bed a man of wealth at night rises a pauper in the morning. Possessing these qualities, it has the highest economical value; and although statesmen who assail or defend, who raise up or put down, systems of commercial, manufacturing, or agricultural policy, have seldom or never deigned to look at education as the grand agent for the development or augmentation of national resources, yet it measures the efficacy of every other means of aggrandizement, and is more powerful in the production and gainful employment of the total wealth of a country than all other things mentioned in the books of the political economist. Education is an antecedent agency; for it must enlighten mankind in the choice of pursuits, it must guide them in the selection and use of the most appropriate means, it must impart that confidence and steadiness of purpose which results from comprehending the connections of a long train of events, and seeing the end from the beginning, or all enterprises will terminate in ruin.

Considering education, then, as a producer of wealth, it follows that the more educated a people are, the more will they abound in all those conveniences, comforts, and satisfactions which money will buy; and, other things being equal, the increase of competency and the decline of pauperism will be measurable on this scale. There are special reasons giving peculiar force to these considerations in the State of Massachusetts. Our population is principally divided into agriculturists, manufacturers, and mechanics. We have no *idle* class, no class born to such hereditary wealth as supersedes the necessity of labor, and no class subsisting by the services of hereditary bondmen. All, with exceptions too minute to be noticed, must live by their own industry and frugality. The master and

the laborer are one ; and hence the necessity that all should have the health and strength by which they can work, and the judgment and knowledge by which they can plan and direct. The muscle of a laborer and the intelligence of an employer must be united in the same person.

The healthful and praiseworthy employment of Agriculture requires knowledge for its successful prosecution. In this department of industry we are in perpetual contact with the forces of Nature. We are constantly dependent upon them for the pecuniary returns and profits of our investments, and hence the necessity of knowing what those forces are, and under what circumstances they will operate most efficiently, and will most bountifully reward our original outlay of money and time. In the presence of the savage, the exuberance of Nature may cover the earth with magnificent forests, through whole degrees of latitude and longitude, and clothe and beautify it with the grasses and flowers of the prairie to whose ocean-like expanse the eye can discover no shore ; magnificent and poetic spectacles, indeed ; yet, for the sustentation of human life, for the existence and extension of human happiness, almost valueless. But under the art of agriculture, which is only another name for the knowledge of natural powers, millions are feasted on a territory, where, before, a hundred starved. Perhaps there is no spot in the world, of such limited extent, where there is a greater variety of agricultural productions than in Massachusetts. This brings into requisition all that chemical and experimental knowledge which pertains to the rotation of crops, and the enrichment of soils. If rotation be disregarded, the repeated demand upon the same soil to produce the same crop will exhaust it of the elements on which that particular crop will best thrive ; and, if its chemical ingredients and affinities are not understood, an attempt may be made to re-enforce it by substances with which it is already surcharged, instead of renovating it with those of which it has been exhausted by previous growths. But, for these arrangements and adaptations, knowledge is the grand desideratum ; and the addition of a new

fact to a farmer's mind will often increase the amount of his harvests more than the addition of acres to his estate. Why is it, that, if we except Egypt, all the remaining territory of Africa, containing nearly ten millions of square miles, with a soil most of which is incomparably more fertile by Nature, produces less for the sustenance of man and beast than England, whose territory is only fifty thousand square miles? In the latter country, knowledge has been a substitute for a genial climate and an exuberant soil; while, in the former, it is hardly a figurative expression to say that all the maternal kindness of Nature, powerful and benignant as she is, has been repulsed by the ignorance of her children. Doubtless, industry as well as knowledge is indispensable to productiveness; but knowledge must precede industry, or the latter will work to so little effect as to become discouraged and to relapse into the slothfulness of savage life. But, without further exposition, it may be remarked generally, that the spread of intelligence, through the instrumentality of good books and the cultivation in our children of the faculties of observing, comparing, and, reasoning through the medium of good schools, would add millions to the agricultural products of the Commonwealth, without imposing upon the husbandman an additional hour of labor. It would be as foolish for us as for the African to suppose that we have reached the ultimate boundary of improvement.

In regard to another branch of industry, the State of Massachusetts presents a phenomenon, which, all things being considered, is unequalled in any part of the world. I refer to the distribution or apportionment of its citizens among the different departments of labor. With a population of only eighty-seven thousand engaged in agriculture, we have eighty-five thousand engaged in manufactures and trades. The proportion, therefore, in this State, of the latter to the former, is almost as one to one, while the proportion for the whole Union falls but a fraction below one to five. If to the eighty-five thousand engaged in manufactures and trades are added the twenty-seven (almost twenty-eight) thousand employed in navigating the

ocean, and to whom, as a class, the succeeding views are, to a great extent, applicable, we shall find that the capital and labor of the State embarked in the latter employments far exceed those devoted to agricultural pursuits.

Now, for the successful prosecution, it may almost be said, for the very existence amongst us of the manufacturing and mechanic arts, there must be not only the exactness of science, but also exactness or skill in the application of scientific principles throughout the whole processes, either of constructing machinery, or of transforming raw materials into finished fabrics. This ability to make exact and skilful applications of science to an unlimited variety of materials, and especially to the subtle but most energetic agencies of Nature, is one of the latest attainments of the human mind. It is remarkable that astronomy, sculpture, painting, poetry, oratory, and even ethical philosophy, had made great progress thousands of years before the era of the manufacturing and mechanic arts. This era, indeed, has but just commenced; and already the abundance, and, what is of far greater importance, the universality, of personal, domestic, and social comforts it has created, constitutes one of the most important epochs in the history of civilization. The cultivation of these arts is conferring a thousand daily accommodations and pleasures upon the laborer in his cottage, which, only two or three centuries ago, were luxuries in the palace of the monarch. Through circumstances incident to the introduction of all economical improvements, there has hitherto been great inequality in the distribution of their advantages, but their general tendency is greatly to ameliorate the condition of the mass of mankind. It has been estimated that the products of machinery in Great Britain, with a population of eighteen millions, is equal to the labor of hundreds of millions of human hands. This vast gain is effected without the conquest or partitioning of the territory of any neighboring nation, and without rapine or the confiscation of property already accumulated by others. It is an absolute creation of wealth; that is, of those articles, commodities, im-

provements, which we appraise and set down as of a certain moneyed value, alike in the inventory of a deceased man's estate, and in the grand valuation of a nation's capital. These contributions to human welfare have been derived from knowledge,—from knowing how to employ those natural agencies, which from the beginning of the race had existed, but had laid dormant or run uselessly away. For mechanical purposes, what is wind or water, or the force of steam, worth, until the ingenuity of man comes in, and places the wind-wheel, the water-wheel, or the piston, *between* these mighty agents and the work he wishes them to perform? but, after the invention and intervention of machinery, how powerful they become for all purposes of utility! In a word, these great improvements, which distinguish our age from all preceding ages, have been obtained from Nature by addressing her in the language of Science and Art,—the only language she understands, yet one of such all-prevailing efficacy that she never refuses to comply to the letter with all petitions for wealth or physical power, if they are preferred to her in that dialect.

Now, it is easy to show, from reasoning, from history, and from experience, that an early awakening of the mind is a prerequisite to success in the useful arts. It must be an awakening not to feeling merely, but to thought. In the first place, a clearness of perception must be acquired, or the power of taking a correct mental transcript, copy, or image of whatever is seen. This, however, though indispensable, is by no means sufficient. It may answer for mere automatic movements,—for the servile copying of the productions of others. The Chinese excel in imitations of this kind; but, as they have little inventive genius, the learner echoes the teacher, the apprentice repeats the master; and thus the human mind, for generation after generation, presents the monotonous aspects of a revolving cylinder, which turns up the same phases at each successive revolution. But the talent of improving upon the labors of others requires, not only the capability of receiving an exact mental copy or imprint of all the objects of sense or reasoning;

it also requires the power of reviving or reproducing at will all the impressions or ideas before obtained, and also the power of changing their collocations, of re-arranging them into new forms, and of adding something to, or removing something from, the original perceptions, in order to make a more perfect plan or model. If a shipwright, for instance, would improve upon all existing specimens of naval architecture, he would first examine as great a number of ships as possible ; this done, he would revise the image which each one imprinted upon his mind ; and, with all the fleets which he had inspected present to his imagination, he would compare each individual vessel with all the others, make a selection of one part from one, and of another part from another, apply his own knowledge of the laws of moving and of resisting forces to all, and thus create in his own mind the complex idea or model of a ship, more perfect than any of those he had seen. Now, every recitation in a school, if rightly conducted, is a step towards the attainment of this wonderful power. With a course of studies judiciously arranged and diligently pursued through the years of minority, all the great phenomena of external Nature, and the most important productions in all the useful arts, together with the principles on which they are evolved or fashioned, would be successfully brought before the understanding of the pupil. He would thus become familiar with the substances of the material world, and with their manifold properties and uses ; and he would learn the laws — comparatively few — by which results infinitely diversified are produced. When such a student goes out into life, he carries, as it were, a plan or a model of the world in his own mind. He cannot, therefore, pass, either blindly or with the stupid gaze of the brute creation, by the great objects and processes of Nature ; but he has an intelligent discernment of their several existences and relations, and their adaptation to the uses of mankind. Neither can he fasten his eye upon any workmanship or contrivance of man without asking two questions, — first, how is it ? and, secondly, how can it be improved ? Hence, he has as great an advantage over an



ignorant man as one traveller in a foreign country, who is familiar with the language of the people where he is journeying, has over another incapable of understanding a word that he hears. The one also carries a map of the whole country in his hand, while the other is without path or guide. Hence it is, too, that all the processes of Nature, and the contrivances of Art, are so many lessons or communications to an instructed man; but an uninstructed one walks in the midst of them like a blind man amongst colors or a deaf man amongst sounds. The Romans carried their aqueducts from hill-top to hill-top on lofty arches, erected at an immense expenditure of time and money. One idea, — that is, a knowledge of the law of the equilibrium of fluids, — a knowledge of the fact that water in a tube will rise to the level of the fountain, would have enabled a single individual to do with ease, what, without that knowledge, it required the wealth of an empire to accomplish.

It is in ways similar to this, — that is, by accomplishing greater results with less means; by creating products, at once cheaper, better, and by more expeditious methods; and by doing a vast variety of things otherwise impossible, — that the cultivation of mind may be truly said to yield the highest pecuniary requital. Intelligence is the great money-maker, — not by extortion, but by production. There are ten thousand things in every department of life, which, if done in season, can be done in a minute, but which, if not seasonably done, will require hours, perhaps days or weeks, for their performance. An awakened mind will see and seize the critical juncture; the perceptions of a sluggish one will come too late, if they come at all. A general culture of the faculties gives versatility of talent, so that, if the customary business of the laborer is superseded by improvements, he can readily betake himself to another kind of employment; but an uncultivated mind is like an automaton, which can do only the one thing for which its wheels or springs were made. Brute force expends itself unproductively. It is ignorant of the manner in which Nature works, and hence it cannot avail itself of her mighty agencies.

Often, indeed, it attempts to oppose Nature. It throws itself across the track where her resistless car is moving. But knowledge enables its possessor to employ her agencies in his own service; and he thereby obtains an amount of power, without fee or reward, which thousands of slaves could not give. Every man who consumes a single article, in whose production or transportation the power of steam is used, has it delivered to him cheaper than he could otherwise have obtained it. Every man who can avail himself of this power, in travelling, can perform the business of three days in one, and so far add two hundred per cent to the length of his life as a business-man. What innumerable millions has the invention of the cotton-gin by Whitney added, and will continue to add, to the wealth of the world! — a part of which is already realized, but vastly the greater part of which is yet to be received, as each successive day draws for an instalment which would exhaust the treasury of a nation. The instructed and talented man enters the rich domains of Nature, not as an intruder, but, as it were, a proprietor, and makes her riches his own.

And why is it, that, so far as this Union is concerned, four-fifths of all the improvements, inventions, and discoveries, in regard to machinery, to agricultural implements, to superior models in ship-building, and to the manufacture of those refined instruments on which accuracy in scientific observations depends, have originated in New England? I believe no adequate reason can be assigned, but the early awakening and training of the power of thought in our children. The suggestion is not made invidiously, but in this connection it has too important a bearing to be omitted. Let any one, who has resided or travelled in those States where there are no Common Schools, compare the condition of the people at large, as to thrift, order, neatness, and all the external signs of comfort and competence, with the same characteristics of civilization in the farm-houses and villages of New England. These contrasts exist, notwithstanding the fertility of the soil and the abundance of mineral resources, in the former States, as compared

with the sterile surface and granite substratum of the latter. Never was a problem more clearly demonstrated than that even a moderate degree of intelligence, diffused through the mass of the people, is more than an equivalent for all the prodigality of Nature. It is said, indeed, in regard to those States where there are no provisions for general education, that the want of energy and forecast, the absence of labor-saving contrivances, and an obtuseness in adapting means to ends, are the consequences of a system of involuntary servitude: but what is this, so far as productiveness is concerned, but a want of knowledge? what is it but the existence of that mental imbecility and torpor which arise from personal and hereditary neglect? In conversing with a gentleman who had possessed most extensive opportunities for acquaintance with men of different countries and of all degrees of intellectual development, he observed that he could employ a common immigrant or a slave, and, if he chose, could direct him to shovel a heap of sand from one spot to another, and then back into its former place, and so to and fro through the day; and that, with the same food or the same pay, the laborer would perform this tread-mill operation without inquiry or complaint; but, added he, neither love nor money would prevail on a New-Englander to prosecute a piece of work of which he did not see the utility. There is scarcely any kind of labor, however simple or automatic, which can be so well performed without knowledge in the workman as with it. It is impossible for an overseer or employer at all times to supply mind to the laborer. In giving directions for the shortest series or train of operations, something will be omitted or misunderstood; and, without intelligence in the workman, the omission or the mistake will be repeated in the execution.

It is a fact of universal notoriety, that the manufacturing population of England, as a class, work for half, or less than half, the wages of our own. The cost of machinery there also is but about half as much as the cost of the same articles with us; while our capital, when loaned, produces nearly double the rate of English interest. Yet, against these grand adverse cir-

cumstances, our manufacturers, with a small percentage of tariff, successfully compete with English capitalists in many branches of manufacturing business. No explanation can be given of this extraordinary fact, which does not take into the account the difference of education between the operatives in the two countries. Yet where, in all our Congressional debates upon this subject, or in the discussions and addresses of National Conventions, has this fundamental principle been brought out, and one, at least, of its most important and legitimate inferences displayed; viz., that it is our wisest policy as citizens—if, indeed, it be not a duty of self-preservation as men—to improve the education of our whole people, both in its quantity and quality? I have been told by one of our most careful and successful manufacturers, that on substituting, in one of his cotton-mills, a better for a poorer educated class of operatives, he was enabled to add twelve or fifteen per cent to the speed of his machinery, without any increase of damage or danger from the acceleration. How direct and demonstrative the bearing which facts like this have upon the wisdom of our law respecting the education of children in manufacturing establishments! What prominence and cogency do they give to the argument for obeying it, if not from motives of humanity, at least from those of policy and self-interest! I am sorry to say that this benignant and parental law is still, in some cases, openly disregarded; and that there are employers amongst us who say, that if their hands come punctually to their work, and continue at it during the regular hours, it is immaterial to them what private character they sustain, and whether they attend the evening school or the lyceum lecture on the week-day, or go to church on the sabbath.

The number of females in this State engaged in the various manufactures of cotton, straw-plaiting, &c., has been estimated at forty thousand; and the annual value of their labor, at one hundred dollars each, on an average, or four millions of dollars for the whole. From the facts stated in the letters of Messrs. Mills and Clark, above cited, it appears that there is a differ-

ence of not less than fifty per cent between the earnings of the least educated and of the best educated operatives, — between those who make their marks, instead of writing their names, and those who have been acceptably employed in school-keeping. Now, suppose the whole forty thousand females engaged in the various kinds of manufactures in this Commonwealth to be degraded to the level of the lowest class, it would follow that their aggregate earnings would fall at once to two millions of dollars. But, on the other hand, suppose them all to be elevated by mental cultivation to the rank of the highest, and their earnings would rise to the sum of six millions of dollars annually.

I institute no comparison in regard to the company imported from England, who, though accustomed to work in the mills of Manchester, could not earn their living here.

These remarks, in regard to other States or countries, emanate from no boastful or vain-glorious spirit. They come from a very different mood of mind; for I have the profoundest conviction, — and could fill much space with facts that would justify it, — that other communities do not fall short of our own so much as we fall short of what we might easily become.

A few instances, of a familiar kind, exemplifying the axiom that "knowledge is power," will close this Report.

M. Redelet, in his work, *Sur L'Art de Bâtir*, gives the following account of an experiment made to test the different amounts of force, which, under different circumstances, were necessary to move a block of squared granite, weighing a thousand and eighty pounds.

In order to move this block along the floor of a roughly-chiselled quarry, it required a force equal to seven hundred and fifty-eight pounds.

To draw the same stone over a floor of planks, it required a force equal to six hundred and fifty-two pounds.

Placed on a platform of wood, and drawn over the same floor, it required six hundred and six pounds.

By soaping the two surfaces of wood, the requisite force was reduced to a hundred and eighty-two pounds.

Placed on rollers of three inches diameter, and a force equal to thirty-four pounds was sufficient.

Substituting a wooden for a stone floor, and the requisite force was twenty-eight pounds.

With the same rollers on a wooden platform, it required a force equal to twenty-two pounds only.

At this point, the experiments of M. Redelet stopped. But by improvements since effected, in the invention and use of locomotives on railroads, a traction or draft of eight pounds is sufficient to move a ton of twenty-two hundred and forty pounds: so that a force of less than four pounds would now be sufficient to move the granite block of a thousand and eighty pounds; that is, a hundred and eighty-eight times less than was required in the first instance. When, therefore, mere animal or muscular force was used to move the body, it required about two-thirds of its own weight to accomplish the object; but, by adding the contrivances of *mind* to the strength of *muscle*, the force necessary to move it is reduced more than a hundred and eighty-eight times. Here, then, is a partnership, in which *mind* contributes a hundred and eighty-eight shares to the stock to one share contributed by *muscle*; or, while *brute strength* represents one man, *ingenuity* or *intelligence* represents a hundred and eighty-eight men.

Dr. Potter, in his late work, entitled "The Principles of Science, applied to the Domestic and Mechanic Arts, and to Manufactures and Agriculture," has the following, p. 29 n.: —

"The increasing powers of the steam-loom are shown in the following statement, furnished by a manufacturer: —

"A very good *hand-weaver*, twenty-five or thirty years of age, will weave *two* pieces of 9-8ths shirting a week.

"In 1823, a *steam-loom weaver*, about fifteen years of age, attending two looms, could weave *seven* similar pieces in a week.

"In 1826, a *steam-loom weaver*, about fifteen years of age, attending two looms, could weave *twelve* similar pieces in a week; some could weave *fifteen* pieces.

“ ‘In 1833, a *steam-loom weaver*, from fifteen to twenty years of age, assisted by a girl about twelve years of age, attending four looms, could weave *eighteen* similar pieces in a week ; some could weave *twenty* pieces.’ ”

Here, then, during a period of only ten years, the application of *mind* to a particular branch of business enabled a lad of fifteen years of age, assisted by a girl of twelve, to do from nine to ten times as much work as had before been done by an accomplished and mature workman.

In the manufacture of needles, a number equal to twenty thousand is thrown promiscuously into a box, mingled heads and points, and crossing each other in every possible direction. This happens several times during the various stages of manufacturing needles ; and, in each case, it is necessary to arrange them lengthwise or in a parallel direction. One would suppose, beforehand, that the picking out of twenty thousand needles entangled together, and forming, as it were, one great iron burr, and placing them all in a parallel direction, would be a formidable task, even for a week ; and also that the operator would need some insurance on the ends of his fingers, or be obliged to submit to a very uncomfortable species of blood-letting. But, by a simple and ingenious contrivance, aided by a little sleight of hand, the work is done in a few minutes. It is unnecessary to inquire how much such ingenuity diminishes the price of needles, because, without it, there would be no needles at any price.

Not more than thirty years ago, it was uncommon for a glazier's apprentice, even after having served an apprenticeship of seven years, to be able to cut glass with a diamond, without spending much time, and destroying much of the glass upon which he worked. The invention of a simple tool has put it in the power of the merest tyro in the trade to cut glass with facility and without loss. A man, who had a *mind as well as fingers*, observed that there was one direction in which the diamond was almost incapable of abrasion or wearing by use. The tool not only steadies the diamond, but fastens it in that direction.

The lathe, the old-fashioned spinning-wheel, and the loom, by having a treadle for the foot, became equal to the addition of another hand to the workman.\*

The operation of tanning leather consists in exposing a hide to the action of a chemical ingredient called tannin for a length of time sufficient to allow every particle of the hide to become saturated with the solution. In making the best leather, the hides used to lie in the pit for six, twelve, or eighteen months, and sometimes for two years; the tanner being obliged to wait, all this time, for a return of his capital. By the modern process, the hides are placed in a close pit with a solution of the tannin-matter; and, the air being exhausted, the liquid penetrates through every pore and fibre of the skin, and the whole process is completed in a few days.

The bleaching of cloth, which used to be effected in the open

\* "Without tools, that is, by the mere efforts of the human hand, there are, undoubtedly, multitudes of things which it would be impossible to make. Add to the human hand the rudest cutting instrument, and its powers are enlarged; the fabrication of many things then becomes easy, and that of others possible, with great labor. Add the saw to the knife or the hatchet, and other works become possible, and a new course of difficult operations is brought into view, whilst many of the former are rendered easy. This observation is applicable even to the most perfect tools or machines. It would be possible for a very skilful workman, with files and polishing substances, to form a cylinder out of a piece of steel; but the time which this would require would be so considerable, and the number of failures would probably be so great, that, for all practical purposes, such a mode of producing a steel cylinder might be said to be impossible. The same process, by the aid of the lathe and the sliding-rest, is the every-day employment of hundreds of workmen." — *Babbage on the Economy of Machinery and Manufactures*.

"The earliest mode of cutting the trunks of a tree into planks was by the use of the hatchet or the adze. It might, perhaps, be first split into three or four portions, and then each portion was reduced to a uniform surface by those instruments. With such means, the quantity of plank produced would probably not equal the quantity of the raw material wasted by the process, and, if the planks were thin, would certainly fall short of it. An improved tool, the saw, completely reverses the case. In converting a tree into thick planks, it causes the waste of a very small fractional part; and, even in reducing it to planks of only an inch in thickness, it does not waste more than an eighth part of the raw material. When the thickness of the plank is still further reduced, as is the case in cutting wood for veneering, the quantity of material destroyed again begins to bear a considerable proportion to that which is used; and hence circular saws, having a very thin blade, have been employed for such purposes. In order to economize still further the more valuable woods, Mr. Brunel contrived a machine, which, by a system of blades, cut off the veneer in a continuous shaving, thus rendering the whole of the piece of timber available." — *Id.*



air and in exposed situations where a temptation to theft was offered (and in England hundreds, and probably thousands, of men have yielded, and forfeited their lives), is now performed in an unexposed situation, and in a manner so expeditious, that cloth is bleached as much more rapidly than it formerly was as hides are tanned.

It is stated by Lord Brougham, in his beautiful "Discourse on the Advantages of Science," that the inventor of the new mode of refining sugar made more money in a shorter time, and with less risk and trouble, than perhaps was ever realized from any previous invention.

Intelligence also prevents loss, as well as makes profit. How much time and money have been squandered in repeated attempts to invent machinery, after a principle had been once tested, and had failed through some defect, inherent and natural, and therefore insuperable! Within thirty years, not less than five patents have been taken out, in England and the United States, for a certain construction of paddle-wheels for a steamboat, which construction was tested and condemned as early as 1810. A case once came within my own knowledge, of a man who spent a fortune in mining for coal, when a work on geology which would have cost but a dollar, and might have been read in a week, would have informed him that the stratum where he began to excavate belonged to a formation lower down in the natural series than coal ever is, or, according to the constitution of things, ever can be found. He therefore worked into a stratum which must have been formed before a particle of coal, or even a tree or a vegetable, existed on the planet.

These are a few specimens, on familiar subjects, taken almost at random, for the purpose of showing the inherent superiority of any association or community, whether small or great, where *mind* is a member of the partnership. What is true of the above-mentioned cases is true of the whole circle of those arts by which human life is sustained, and human existence comforted, elevated, and embellished. Mind has been the improver, for

matter cannot improve itself; and improvement has advanced in proportion to the number and culture of the minds excited to activity and applied to the work. Similar advancements have been effected throughout the whole compass of human labor and research: in the arts of transportation and locomotion, from the employment of the sheep and the goat, as beasts of burden, to the steam-engine and the railroad-car; in the art of navigation, from the canoe clinging timidly to the shore, to steamships which boldly traverse the ocean; in hydraulics, from carrying water by hand, in a vessel, or in horizontal aqueducts, to those vast conduits which supply the demands of a city, and to steam fire-engines which throw a column of water to the top of the loftiest buildings; in the arts of spinning and rope-making, from the hand-distaff to the spinning-frame, and to the machine which makes cordage or cables of any length, in a space ten feet square; in horology, or time-keeping, from the sun-dial and the water-clock to the watch, and to the chronometer by which the mariner is assisted in measuring his longitude, and in saving property and life; in the extraction, forging, and tempering of iron, and other ores having malleability to be wrought into all forms, and used for all purposes, and supplying, instead of the stone-hatchet or the fish-shell of the savage, an almost infinite variety of instruments, which have sharpness for cutting, or solidity for striking; in the arts of vitrification, or glass-making, giving not only a multitude of commodious and ornamental utensils for the household, but substituting the window for the unsightly orifice or open casement, and winnowing light and warmth from the outward and the cold atmosphere; in the arts of induration by heat, from bricks dried in the sun to those which withstand the corrosion of our climate for centuries, or resist the intensity of the furnace; in the arts of illumination, from the torch cut from the fir or pine tree to the brilliant gas-light which gives almost a solar splendor to the nocturnal darkness of our cities; in the arts of heating and ventilation, which at once supply warmth for comfort and pure air for health; in the art of building, from the hol-

lowed trunk of a tree, or the roof-shaped cabin, to those commodious and lightsome dwellings which betoken the taste and competence of our villages and cities; in the art of copying or printing, from the toilsome process of hand-copying, where the transcription of a single book was the labor of months or years, and sometimes almost of a life, to the power-printing press, which throws off sixty printed sheets in a minute; in the art of paper-making, from the preparation of the inner bark of a tree, cleft off, and dried at immense labor, to the machinery of Fourdrinier, from which there jets out an unbroken stream of paper with the velocity and continuousness of a current of water; and, in addition to all these, in the arts of modelling and casting; of designing, engraving, and painting; of preserving materials and of changing their color, of dividing and uniting them, &c., &c.,—an ample catalogue, whose very names and processes would fill columns.

Now, for the perfecting of all these operations, from the tedious and bungling process to the rapid and elegant; for the change of an almost infinite variety of crude and worthless materials into useful and beautiful fabrics,—*mind* has been the agent. Succeeding generations have outstripped their predecessors, just in proportion to the superiority of their mental cultivation. When we compare different people or different generations with each other, the diversity is so great, that all must behold it. But there is the same kind of difference between contemporaries, fellow-townsmen, and fellow-laborers. Though the uneducated man works side by side with the intelligent, yet the mental difference between them places them in the same relation to each other that a past age bears to the present. If the ignorant man knows no more respecting any particular art or branch of business than was generally known during the last century, he belongs to the last century; and he must consent to be outstripped by those who have the light and knowledge of the present. Though they are engaged in the same kind of work, though they are supplied with the same tools or implements for carrying it on, yet so long as one has

only an arm, but the other has an arm and a mind, their products will come out stamped and labelled all over with marks of contrast: superiority and inferiority, both as to quantity and quality, will be legibly written on their respective labors. It is related by travellers among savage tribes, that when, by the help of any ingeniously-devised instrument or apparatus, they have performed some skilful manual operation, the savages have purloined from them the instrument they had used, supposing there was some magic in the apparatus itself, by which the seeming miracle had been performed; but, as they could not steal the art of the operator with the implement which he employed, the theft was fruitless. Any person who expects to effect, with less education, what another is enabled to do with more, ought not to smile at the delusion of the savage, or the simplicity of his reasoning.

On a cursory inspection of the great works of art, — the steam-engine, the printing-press, the power-loom, the mill, the iron-foundry, the ship, the telescope, &c., &c., — we are apt to look upon them as having sprung into sudden existence, and reached their present state of perfection by one, or, at most, by a few mighty efforts of creative genius. We do not reflect that they have required the lapse of centuries, and the successive application of thousands of minds, for the attainment of their present excellence; that they have advanced from a less to a more perfect form by steps and gradations almost as imperceptible as the growth by which an infant expands to the stature of a man; and that, as later discoverers and inventors had first to go over the ground of *their* predecessors, so must future discoverers and inventors first master the attainments of the present age before they will be prepared to make those new achievements which are to carry still further onward the stupendous work of improvement.

Amongst a people, then, who must gain their subsistence by their labor, what can be so economical, so provident and far-sighted, and even so wise, — in a lawful and laudable, though not in the highest sense of that word, — as to establish, and,

with open heart and hand, to endow and sustain, the most efficient system of universal education for their children ; and, where the material bounties of Nature are comparatively narrow and stinted, to explore, in their stead, those exhaustless and illimitable resources of comfort and competency and independence which lie hidden in the yet dormant powers of the human intellect?

But, notwithstanding all I have said of the value of education in a pecuniary sense, and of its power to improve and elevate the outward domestic and social condition of all men, yet, in closing this Report, I should do injustice to my feelings, did I abstain from declaring, that, to my own mind, this tribute to its worth, however well deserved, is still the faintest note of praise which can be uttered in honor of so noble a theme ; and that, however deserving of attention may be the *economical* view of the subject which I have endeavored to present, yet it is one that dwindles into insignificance when compared with those loftier and more sacred attributes of the cause which have the power of converting material wealth into spiritual well-being, and of giving to its possessor lordship and sovereignty alike over the temptations of adversity, and the still more dangerous seducements of prosperity, and which — so far as human agency is concerned — must be looked to for the establishment of peace and righteousness upon earth, and for the enjoyment of glory and happiness in heaven.

## REPORT FOR 1842.

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GENTLEMEN, —

. . . DURING the last year, I have obtained returns from almost every public school in the State, respecting the number of scholars who are engaged in studies above the elementary or statutory course prescribed for the lowest grade of our schools. The result is as follows: —

Scholars studying	History of the United States	.	.	.	10,177
"	" General History	.	.	.	2,571
"	" Algebra	.	.	.	2,333*
"	" Book-keeping	.	.	.	1,472
"	" Latin Language	.	.	.	858
"	" Rhetoric	.	.	.	601
"	" Geometry	.	.	.	463
"	" Human Physiology	.	.	.	416
"	" Logic	.	.	.	330
"	" Surveying	.	.	.	249
"	" Greek Language	.	.	.	183

In some of the public schools, other branches, such as botany, chemistry, natural history, astronomy, intellectual philosophy, and the French language, are attended to; but, as these are not included in the statutory course prescribed for the highest grade of schools, I have not obtained any particular information respecting them. They are not extensively pursued.

Now, is not a bare inspection of the above list of studies

\* It was found last year, in the State of New York, that out of 173,384 pupils in attendance upon the public schools, in forty-three out of the fifty-nine counties in the State, only 616 were studying algebra.

sufficient to show that caprice rather than intelligence has presided over their adoption? In this general statement, it is impossible to exhibit the relative proportions in which these different studies are distributed among the different towns in the Commonwealth. It must suffice to state generally, that there is the greatest inequality, not only between different towns, but between different schools in the same town, whose circumstances in other respects are substantially alike.

But, supposing a judicious distribution to exist, can any sufficient reason be given for the proportion which prevails among them? Does the numerical order in which they stand correspond with the natural order, — that is, with an order founded upon their relative importance? Can any satisfactory ground be assigned why algebra — a branch which not one man in a thousand ever has occasion to use in the business of life — should be studied by more than twenty-three hundred pupils, and book-keeping, which every man, even the day-laborer, should understand, should be attended to by only a little more than half that number? Among farmers and road-makers, why should geometry take precedence of surveying? and, among seekers after intellectual and moral truth, why should rhetoric have double the followers of logic?

In the entire list above given, is there one which can claim rightful precedence of that which stands almost the lowest in it? — I mean human physiology, or an exposition of the laws of health and life. After a competent acquaintance with the common branches, is there a single department in the vast range of secular knowledge, more fundamental, more useful for increasing our ability to perform the arduous duties and to bear the inevitable burdens of life, more astonishing for the wonders it reveals, or better fitted to enforce upon us a lively conviction of the wisdom and goodness of God, than a study of our physical frame, its beautiful adaptations and arrangements, the marvellous powers and properties with which it is endowed, and the conditions indispensable to its preservation in a state of vigor, usefulness, and enjoyment? Yet the number in our

public schools engaged in this study, during the last year, was only four hundred and sixteen ; and more than one-fifth part of these were in the single town of Nantucket.

The community needs a sound and practical treatise on the relative value and importance of what are called the higher studies, so that these studies might be taken up in an order, and pursued for a length of time, proportioned to their respective utility. Even if I were able to throw out any serviceable hints in regard to these branches, or to assign to each of them its place on a scale graduated according to their relative merits, the appropriate limits of a Report like this would debar me from the undertaking.

The study of human physiology, however, — by which I mean both the laws of life and hygiene, or the rules and observances by which health can be preserved and promoted, — has claims so superior to every other, and, at the same time, so little regarded or understood by the community, that I shall ask the indulgence of the Board while I attempt to vindicate its title to the first rank in our schools, after the elementary branches.

In civilized communities, where the rates of mortality have become a statistical science, it is found that more than one-fifth, almost a fourth part, of the human race die before attaining the age of one year. Instead of filling the number of threescore years and ten, — the period spoken of by the Psalmist as the allotted life of man, — almost one-quarter part of the race perish before attaining one-seventieth part of their natural term of existence. And, before the age of five years, more than a third part of all who are born have died.

After the age of two or three years, however, the annual proportion of deaths rapidly diminishes. Those children who have inherited feeble constitutions from their parents have been thinned off, and the rest have escaped the terrible slaughtering of that ignorance which presides over the nursery. Nature then seems to take them under her care ; she prompts them to activity, and even counsels disobedience and stratagem to



secure for them the oft-prohibited boon of exercise and outdoor air. Still a vast majority of mankind die before attaining *one-half* of that age at which the faculties of body and mind reach their fullest development and vigor. Before the age of twenty years, — that is, before two-sevenths of the scriptural period has elapsed, — one-half of the human race are supposed to have died. Nor is this all, or the worst; for a vast portion of those who survive suffer pains which it is frightful to think upon. The sick and valetudinary, instead of being here and there an individual, are a countless host; and it is rare to find any person entirely free from all ailments, organic and functional. Instead of contributing their share to those productions and improvements by which life is sustained, and the arts of life and the resources of well-being supplied, these classes are grievous burdens upon their friends or upon society. The worldly prosperity of thousands of families is destroyed by the diseases or infirmities of one, if not both, of their heads. Children are made orphans, or mainly deprived of parental nurture and supervision; or, on the other hand, parents are bereaved of their children. And further, although it is most true that the calamity of sickness, or even of death itself, is nothing, compared with crime, yet it is also true that sickness induces poverty, which is one of the tempters to crime; and that a deranged condition of the physical system often urges to vicious and destructive indulgences by the unnatural appetites which it creates, and thus ill health becomes the parent of guilt as well as of bodily pains.

Should any one think that this view of the subject refers too much of human suffering and delinquency to an ignorance or disregard of the *physical laws*, let him learn what the most obvious and palpable of those laws enjoin; and then let him go through society, and see how systematically and flagrantly they are violated, and he will be in haste to retract his former opinion. I have the concurrent authority of many of our most eminent physicians for saying that *one-half* of all human disability, of the suffering and early death inflicted upon man-

kind, proceeds from ignorance, from sheer ignorance, of facts and principles which every parent, *by virtue of his parental relation*, is as much bound to know as a judge is bound to know the civil or criminal law which he undertakes to administer, or as a juror, in a case of life and death, is bound to understand the evidence on which his verdict is to be rendered. When we reflect that every child in the community, before he arrives at the age of twenty years, might and should become acquainted with those organic laws upon which the Creator of the body has made its health and vigor to depend, how worthless in the comparison becomes a knowledge of algebra, of ancient mythology or history, or of all the Grecian and Latin lore which has come down to us from author or commentator! \*

\* Since this Report was written, I have received from England a volume of extraordinary interest and value, entitled "*Report from the Poor-law Commissioners, on an Inquiry into the Sanitary Condition of the Laboring Population of Great Britain*," 1842.

It is an octavo of nearly five hundred pages, and was prepared under one of those Parliamentary Commissions of Inquiry, which, so much to the honor of that country and the benefit of mankind, have been lately instituted in Great Britain.

The work was compiled from the results of investigations into the condition of the laboring classes, both in country and city, — the peasantry, the operatives in factories, the laborers in workshops, mines, and so forth. It is comprehensive in its facts, and philosophical in its deductions; and its materials were evidently prepared and arranged by some of the ablest and most benevolent minds in the kingdom. It traces back a vast proportion of the personal sufferings, physical degeneracy, and brevity of life, of the laboring people, to their sources; and finds their proximate causes to be a want of cleanliness both of dress and person, living in wet or damp apartments, insufficient or unhealthful food, and, pre-eminently, the indulgence in intoxicating drinks, and the breathing of a corrupt atmosphere.

The work ought to be read by every capitalist and manufacturer, and every builder of houses, in this country. I take advantage of the opportunity afforded, while this Report is going through the press, to add in a note a few of the remarkable facts with which the book abounds. They show to what an extent our health and life are in our own hands. The appalling consequences of a violation of the natural laws by the poor and laboring classes of Great Britain are the results, partly of ignorance, and partly of necessity. But in this country, where wages are so much higher, and where the means of a comfortable subsistence are so abundant, almost all the analogous evils suffered by our people are attributable to an ignorance of those laws and observances, the knowledge and practice of which are essential to health and longevity.

In contrasting the comparative chances, or average length of life, of different

But it may be asked whether I would have all our district schools turned into medical schools, and all the children in the State, males and females, educated as physicians. A few

classes, one chapter of the work exhibits the following facts, not drawn from a single city or district, but from various parts of the country:—

No. of Deaths.	IN TRURO.	Average age of Deceased.
33	Professional persons or gentry, and their families . . . . .	40 years.
138	Persons engaged in trade or similarly circumstanced, and their families . . . . .	33 "
447	Laborers, artisans, and others similarly circumstanced, and their families . . . . .	28 "

IN DERBY.		
10	Professional persons or gentry . . . . .	49 "
125	Tradesmen . . . . .	38 "
752	Laborers and artisans . . . . .	21 "

BOLTON UNION.		
103	Gentlemen and persons engaged in professions, and their families . . . . .	34 "
381	Tradesmen and their families . . . . .	23 "
2,232	Mechanics, servants, laborers, and their families . . . . .	18 "

BETHNAL GREEN.		
101	Gentlemen and persons engaged in professions, and their families . . . . .	45 "
273	Tradesmen and their families . . . . .	20 "
1,258	Mechanics, servants, and laborers, and their families . . . . .	10 "

LEEDS BOROUGH.		
79	Gentlemen and persons engaged in professions, and their families . . . . .	44 "
824	Tradesmen, farmers, and their families . . . . .	27 "
3,305	Operatives, laborers, and their families . . . . .	19 "

LIVERPOOL, 1840.		
137	Gentry and professional persons, &c. . . . .	35 "
1,738	Tradesmen and their families . . . . .	12 "
5,507	Laborers, mechanics, and servants, &c. . . . .	15 "

WHITECHAPEL UNION.		
37	Gentlemen and persons engaged in professions, and their families . . . . .	45 "
387	Tradesmen and their families . . . . .	27 "
1,762	Mechanics, servants, and laborers, and their families . . . . .	22 "

remarks will show that no difficulty would be presented by such a question.

The *Laws of Health and Life* are comparatively few and simple. Every person is capable of understanding them. Every child in the State, before arriving at the age of eighteen years, might acquire a competent knowledge of them, and of the reasons on which they are founded. The profession of medicine, on the other hand, is mainly conversant with the *Laws of Disease*. It is these which are so numberless and complex as to defy the profoundest talent, and the study of the longest and most assiduous life, for their thorough comprehension. Infinity is their attribute. Every difference of climate, of occupation, of personal constitution and habits, modifies their character, multiplies their number, and perplexes their intricacy. Human Physiology, or the science of health and life, may be written in one book; for Pathology, or the science

No. of Deaths.	UNIONS IN THE COUNTY OF WILTS.	Average age of Deceased.
119	Gentlemen and persons engaged in professions, and their families . . . . .	50 years.
218	Farmers and their families . . . . .	48 "
2,661	Agricultural laborers and their families . . . . .	33 "

This afflictive catalogue might be extended. But enough has been exhibited to show that health and life are held *upon conditions*, and are forfeitable without redemption, by a non-compliance with them. Even the more favored classes of English society, as it appears by these records, live out but a little more than half their days; while the ranks of the poor and laboring classes are thinned, devastated, by the terrible scourges of vice, penury, and ignorance, and are utterly swept away by the time they reach half the average life of their neighbors.

In Manchester, more than fifty-seven per cent of the laboring classes die before they attain the age of five years; and, in a district in Bethnal Green, it was found, that, out of twelve hundred and sixty-eight deaths amongst the laboring classes in 1839, no less than seven hundred and eighty-two, or one in one and four-sevenths, died at their own residences, under five years of age.

This dreadful havoc of human life and happiness was attributable principally to causes whose nature and effects are discussed in the subsequent pages of this Report. It should be remarked, however, that most of these causes exist in a greater degree of energy and intensity in Eng and than in this country. Those who offend much are beaten with many stripes; those who offend less are beaten with fewer; but, even though they offend in ignorance, they are still beaten with stripes. In regard to the whole range of the laws of health and life, Providence seems to treat mere ignorance as an offence, and to punish it accordingly.

of diseases, thousands and ten thousands of books have been written, and yet the subject seems, at the present time, to be hardly nearer exhaustion than in the age of Galen or Hippocrates.

The economy of Providence seems to be the same in regard to our natural capacity for acquiring the knowledge requisite for the preservation of our health that it is in regard to our capacity for acquiring the knowledge requisite for the performance of our duties. What is essential to all is made attainable by all. Even the heathen — those who were unblessed by the light of the Gospel — were “by nature,” in regard to moral obligations, “a law unto themselves, their conscience bearing witness, and their thoughts accusing or else excusing.” And so our Creator, in giving us desires to better our worldly condition, to improve in the long catalogue of useful arts, and to adorn the useful with the beautiful, to undertake great enterprises for the benefit of our contemporaries, and to make better provision for the happiness of posterity; in implanting in our bosoms these noble impulses, which demand such arduous and long-sustained exertions, — must also have given us the physical capability of performing the labor, and of enduring the toil, which these exalted services require. It would be an impeachment alike of his wisdom and goodness to suppose that he had tormented the race by imbuing them with a class of desires which reason and conscience approve, but had withheld from them all physical capability of carrying those desires into execution. But this physical capability is nothing without a mental ability to acquire the knowledge on which it depends. And hence it is just to infer that this knowledge is attainable, and should be attained by all.

As it can never be well with us *morally*, unless we obey the laws of duty; so it can never be well with us *physically*, unless we obey the laws of health. But we cannot obey, unless we know the law to be obeyed; and we cannot possess this knowledge, unless we are endowed with capacities, which, by cultivation, can be made competent to attain it.

When we look into our own family circles, or abroad upon the community, and behold the utter waste and havoc which disease and infirmity so often make of human usefulness and happiness, the protracted or condensed agonies of the chamber of sickness, the bereavement of parents, or the orphanage of children, we might be almost tempted to question the goodness of the Being by whom we have been called into existence, were we not assured that "affliction cometh not forth of the dust, neither doth trouble spring out of the ground." This "affliction and trouble" are designed to show us that some rule has been transgressed which the Divine Being in his wisdom had established. They are always monitors to warn us to obedience when we have erred wilfully, or, when we have erred ignorantly, to stimulate us to acquire the requisite knowledge, as well as to practise upon it when acquired. Every bodily pain is a special notification that some part of the machinery of life is out of order.

I see no way in which this knowledge can ever be universally, or even very extensively, diffused over the land, except it be through the medium of our Common Schools. All other instrumentalities for instructing mankind reach but a small part of them, and, of course, must fail extensively in accomplishing any general purpose. Only a comparatively small portion of our youth attend the higher seminaries of learning; and, while this species of knowledge is every way as important to females as to males, the latter only enjoy the benefits of our colleges or universities. Besides, the course of studies in these higher seminaries is already so full as almost to forbid the introduction of more; and those branches which have general usage and prescription in their favor will not readily yield to others, however much more intrinsically important. And hence it is that students are instructed in languages, and in the recondite truths of mathematics and astronomy; they are taught all the motions of the planets, and even the librations of the moon, as carefully as though those mighty orbs would fly from their paths or lose their balance if their course and equipoise were

not prescribed anew from year to year, and to class after class ; while the structure of their own bodies, and the simple and beautiful laws on which life and all our capabilities of usefulness are dependent, are almost universally neglected. Lyceum lectures are a medium through which something might be done to inform the public mind on this subject ; but their courses are generally too unsystematic and desultory to be relied upon for communicating this indispensable knowledge to the whole people. Besides, there are many towns, inland and sparsely peopled, where no such institution as a lyceum exists.

I hope to be pardoned for evincing a feeling and a conviction on this subject more deep and strong than will meet with the sympathy or concurrence of others. Within the last six years I have visited schools in every section of the Commonwealth, seaboard and inland, city and country. Every day's observation has added proof to proof, and argument to argument, respecting the importance of physical training. Were I to be carried blindfold, and set down in any school in the State, I could tell at a glance, by seeing the mere outline of the bodies and limbs, without referring to face or hands as a test, what had been the habits of the children composing it. Such as have been accustomed to live in the open air, such as have been subjected to the exposures and the hardy exercises of the farm or the mechanical trade, appear almost like a different race of beings when compared with those who suffer under the amazing parental folly of being delicately brought up. As a general fact, the children of the rural population, and of those who live in sparsely-settled towns upon the seaboard, have double the bodily energy, the vital force, the stamina of constitution, which belong to the children of cities and of crowded towns. A fuller development of body, of limbs, and of brow ; a firmer texture of muscle ; motions evincive, not only of greater vigor, but of longer endurance ; in fine, the whole bodily appearance indicating that they have been laid out by Nature on an ampler scale, — characterize the former as compared with the latter. In whatever would task the physical energies, one individual

of one class would be a match for two of the other. This is emphatically true of females. On the other hand, the children bred in cities excel in sprightliness and vivacity. The nervous temperament more generally prevails. Their perceptions are quicker, and their power of commanding more readily, both themselves and their attainments, greatly superior. Continually is the question forced upon my mind, why, with a higher but perfectly practicable system of schools throughout the State, conducted by teachers of adequate knowledge and refinement, and with a general diffusion of the great principles of the laws of health, we could not have in the country the quickness, ease, and self-command which distinguish the city, and in the city the bodily robustness and the mental energy which signalize the country. The possession of these qualities, by each class, would make a new race.

In visiting schools, I have found it a common occurrence, when the hour of recess arrives, and the scholars are permitted to go out and take exercise for ten minutes in the open air, that some half-dozen pupils, with pale faces, narrow chests, and feeble frames, will continue bending over their desks, too intent upon their lessons to be aroused by the joyous shouts that ring through the schoolroom from abroad. These the teacher complacently points out as the jewels of his school; and fathers and mothers look on with swelling hearts and glistening eyes, as the bright vision of future honors and renown rises to their view. Alas, they do not know that those children are victims of an over-active brain, and that every such disproportionate mental effort is a cast of the shuttle that weaves their shrouds! Of all the pupils in the school, it is most important that those who are disposed to sit so long and study so intensely should be lured forth to engage in some genial sport.

So, in nine-tenths of the schools in the State, composed of children below seven or eight years of age, the practice still prevails of allowing but one recess in the customary session of three hours; although every physiologist and physician knows, that, for every forty-five or fifty minutes' confinement in the



schoolroom, all children under those ages should have at least the remaining fifteen or ten minutes of the hour for exercise in the open air.

There is a frightful extent of ignorance on the subject of the physical laws, as they appertain to the human constitution (and in this sense only I use the phrase), pervading the whole community. Even educated men, who are not physicians, are rare exceptions to this remark. The graduates of colleges and of theological seminaries, who would be ashamed if they did not know that Alexander's horse was named Bucephalus, or had not read Middleton's octavo volume upon the Greek article, are often profoundly ignorant of the great laws which God has impressed upon their physical frame, and which, under penalty of forfeiting life and usefulness, he has commanded them to know and obey.

In travelling through the country, how often will a man, who is at once intelligent and benevolent, be pained at witnessing the location of dwelling-houses on low and marshy spots of ground, where the dampness and exhalations from beneath must be like the daily administration of a poison to the families who reside in them!

How few of our public houses — whether the schoolhouse, the court-house, the lecture-room, or the church — are constructed with any suitable regard to ventilation! And even when they have been constructed upon scientific principles, if they are managed by persons who are ignorant of those principles, the benefits of the construction are cancelled. In cities, and in many of our large manufacturing towns, there is an enormous prostration of health and strength attributable to the smallness and the closeness of the sleeping apartments. In this way the soundest economy is defeated; because it is for the interest of any manufacturer or capitalist, whatever his department of business, to employ healthy workmen. Canal-boats and steamboats commit hardly less havoc upon life and comfort by their accidents and explosions, than by the poisonous atmosphere in which it would almost seem as though their

conductors regarded it as a part of their official duty to steep the passengers. How often are the senses offended by the impurity of the atmosphere, on entering large apartments where great numbers of workmen or workwomen — shoemakers, tailors, compositors — are plying their tasks; especially in the evening, when dozens of smoking lamps are each sending off a stream of poison, in addition to the vitiated atmosphere respired from as many pairs of lungs! As such companies often work in a thin, light dress, or even in an undress, they regard only the physical sensations of heat or cold, while they are neglectful of the vital necessity of pure air.

All these are flagrant, conspicuous monuments of public ignorance on the subject of physiology. They are practices, which, if the common mind were once enlightened, would pass away, like the barbarian rite of sacrificing a child to prevent an eclipse.

How little is the diet, especially of young children, regulated in accordance with the principles of physiology! Nutrition and growth depend not less on the times at which food is given, than on the quality of the food itself. Yet, with most mothers, feeding is the standing remedy for every manifestation of disquiet.\*

After a child has passed the period of infancy, and begins to show that he has impetuous and unborrowed impulses within, he is then hired to do one thing, or to abstain from another, by the promise of some dainty; and thus he is defrauded, at the very outset of life, of that inward, spontaneous emotion of

\* "It is a great mistake," says Dr. A. Combe, "to treat crying as an infallible sign of an empty stomach. New as the infant is to the surrounding world, it shrinks instinctively from every strong sensation, whether of heat or of cold, of pressure or of hardness, of hunger or of repletion. Its only way of expressing all disagreeable feelings is by crying. If it is hungry, it cries; if it is over-fed, it cries; if it suffers from the prick of a pin, it cries; if it lies too long in the same position, so as to cause undue pressure on any one part, it cries; if it is exposed to cold, or any part of its dress is too tight, or it is held in an awkward position, or is exposed to too bright a light, or too loud a sound, it can indicate its discomfort only by its cries; and yet the one remedy used against so many different evils is, not to find out and remove the true cause of offence, but to give it the breast." — *Combe on Infancy*, 182.

pleasure which Nature has made inseparable from every right action performed from a right motive ; and, instead of the feeling of joy which would be a sufficient reward for an angel, there is substituted a sensual pleasure which can only satisfy a brute. Even in educated circles, it is still a common thing for acquaintances and visitors to send or carry to children some pernicious present of confectionery or sweetmeats, as a testimonial of, or perhaps more frequently as a lure to, affection. Thus, not only selfishness, but physical disturbances, are caused, and morbid appetites generated, which, before the close of life, grow into tyrannical desires, involving character and happiness, or subject the sufferer to agonizing struggles and mortifications before they can be subdued. Such an act ought to be regarded as an injury at least, if not an insult ; oftentimes it is both. And even amongst adults who are accounted rational men and women, and who are not obnoxious in any one thing to the charge of sensual indulgences, how little is the grand axiom practised upon, that the temperate man is the greatest epicure ! that is, that, in the long-run of life, those persons will derive the greatest amount of pleasure from their natural appetites who never indulge them to excess.

While such practices in the treatment of childhood and youth, even in the single article of diet, continue to prevail, it will be necessary that more than three hundred and sixty-five miracles should be wrought in their favor, every year of their lives, before they can ever become a vigorous race of men and women. But, until the subject of physical education is better understood, any general reformation is hopeless.

In regard to exercise, many people who acknowledge it to be indispensable, and a necessary of life, still conceive of it as some given amount of bodily motion or of muscular activity, which may be taken, once for all, at the end of a week or a month ; or that, by securing an annual vacation, they can crowd into one toilsome excursion what should be distributed over the year. They do not regard it, like food, as a daily necessity. They do not know that its utility depends wholly

upon certain states, either of the system in general or of the digestive organs in particular. Hence inconvenience and expense are often incurred in order to promote health by means of exercise, which, from its untimeliness or severity, is sure to inflict greater evils than it was intended to avert.

Nothing is more commonly overlooked, than that the great sustainers of a vigorous life — air, exercise, diet — depend upon proportion, adaptation, adjustment; that what is salutary at one time may prove fatal at another; and therefore that there should be a presiding intelligence in every individual, by which his conduct may be so modified as to correspond with ever-varying circumstances. It is injurious to health to be deprived of a sufficiency of food; but, if one is deprived of exercise, it is better that he should be deprived of a corresponding portion of food also. In the long-run, it is fatal to be deprived of fresh air; but, without an adequate quantity of food, even fresh air will consume the vitals of the system. Thus, the hibernating animals live without either food or air for months, when, if they exercised and respired freely, and at the same time were deprived of food, they would perish in a week.

An accurate knowledge of a few great physiological principles, together with a sound judgment or discretion in applying them, will suffice to ward off an inconceivable amount of human suffering, and to confer an ability to make great additions to the public welfare, instead of subtracting from it. The Creator assures us that “he doth not afflict willingly nor grieve the children of men;” and if, in all things, the race should obey the physical laws of God, they would no more suffer physical pain, than they would suffer remorse, or moral pain, if in all things they would obey the moral laws of God.

This subject has its merits, which should command the attention of the statesman and political economist. All investments to preserve or increase the public health would be reimbursed many fold, in an increased capacity for production. One of the most important items in a nation's wealth consists in the healthfulness and vigor enjoyed by its people. All agricul-

turists and manufacturers must feel the force of this remark in regard to their own workmen; and they would feel it still more if they were obliged, at their own expense, to support those workmen during all periods of sickness or incapacity to labor; and this is the relation in which the State stands to its citizens. It has been said by some writers on political economy, that from one-seventh to one-eighth of all the wealth of a country originates in the *labor of each year*. Hence, if any nation or community should cease from production for seven or eight years, the whole of its wealth — houses, lands, goods, money — would be consumed. What a forcible idea of the value of labor is presented by this fact! Yet what a sick workman or operative would be to a capitalist who was obliged to maintain him, a sick citizen is to the Republic. Every sick man, every man rendered unserviceable by general debility or specific ailment, must be subtracted from a nation's available resources. He not only adds nothing to the common stock, but he draws his subsistence in some form — and often, too, a very expensive subsistence — from the storehouse which the industry of others has filled. Omitting all considerations of personal and domestic suffering, of the extinction of intellectual power, and of those moral aberrations which originate in physical derangement and disease, — and considering the race under the mere aspect of a money-making power, — in this respect it is clear, that the health and strength of one community, if set in opposition to the debility or infirmity of another, would be sufficient, not only to determine the balance of trade, but to settle all other points of relative superiority. Let such information be diffused through the public as all the children in our schools might easily acquire, and a single generation would not pass away, without the transfer of immense sums to the other side of the profit-and-loss account in the national ledger. Of course, I do not mean that all diseases could be abolished at once, even by universal diffusion of a knowledge of their causes; or that the era foretold by the prophet would be ushered in, when “the child shall die a hundred years old,” and when there shall be

no "old man that hath not filled his days." The violation of those beautiful and benign laws which the Creator has wrought into our system has been too heinous, and too long persevered in by the race, to be expiated or atoned for in a single age. Disease and debility, transmitted through a long line of ancestors, have acquired a momentum by the length of the descent which cannot at once be overcome. But I do mean, if this subject were generally understood, that such a change would be wrought in a single generation, that a broad and deep current of wealth would be made to change its direction; and, instead of millions annually flowing outward from the common treasury to defray the various expenditures of sickness, that treasury would be replenished by an equal number of millions, coined in the mint, and from the ore, of labor-loving health. Yet, amid all our pecuniary speculations, this grand financial operation of substituting health and strength for sickness and debility—that is, immense gains for immense expenditures—has been unheard of.

In the army and navy, where the expediency of giving battle has been discussed in a council of war, or afterwards, when the causes of defeat have been explained by the vanquished, the state of the sick-list has been made the subject of inquiry. The historian, too, in his account of campaigns, recognizes health and sickness as among the grand causes of success or disaster. But the manly health and vigor of a people engaged in the arts of peace—as among the most essential items in a nation's valuation, as a capital ready for profitable investment in any industrial enterprise, and therefore as a prolific source of public revenue as well as of private wealth—have been overlooked by statesmen and lawgivers, in all their schemes for national aggrandizement.

The pecuniary merits of this subject may be presented under another aspect. Children, at different ages and under different circumstances, may be regarded as representing investments of different sums of money. These investments consist in the amount which has been expended for their nursing, rearing,

clothes, board, education, and so forth, and in the value of the time of others which has been appropriated to them. Though differing exceedingly in regard to different persons, yet, in this country, the aggregate expense, with its accruing interest, of the great majority, at the age of twenty or twenty-one years, can hardly be estimated at less than from five hundred to a thousand dollars, after deducting the value of all services performed. Now, if half mankind die by the time they arrive at this age, or before it, — and half of these come to their untimely end through the ignorance of their parents or themselves, — what an amazing price does our ignorance cost us! With what reckless prodigality do we continue to cherish it! What spend-thrifts we are, not only of the purest sources of affection and domestic happiness, but of wealth!

Compared with the economical value of physiological knowledge to a nation, what is the utility of discovering a north-west passage, or of exploring the sources of the Niger, or circumnavigating a continent of ice around the south pole? Yet no systematic measures have ever been taken by any government for its universal diffusion amongst the people, although it is certain that such knowledge is a condition precedent, without which a high point of health for the whole community can never be reached. Our Common Schools are a channel through which this knowledge — as delightful in the acquisition as it is useful in possession — may be universally diffused; and, in the long-run, its legitimate products will be found to transcend in value the gains of the most adventurous commerce or the spoils of the most successful war.

Perhaps some may deem it a visionary notion, that any considerable amelioration of the public health can be effected by a more extended acquaintance with the physical laws. Many persons attribute disease to accident or chance, or to some occult or remote cause lying beyond human ken, and therefore beyond human control. Some believe diseases to be judgments directly inflicted by Heaven upon the body for offences committed against the moral law. Others, again, suppose pain

and untimely bereavement to be a part of the inevitable lot of humanity, designed to test the strength of our confidence in the goodness of the Creator ; and they therefore deem it a duty to practise resignation to what they suppose to be the divine will, rather than to inquire whether there may not be a duty of prevention as well as of acquiescence. This last view often degenerates into a sort of fatalism, — a belief that what is to be will be, and that our destiny is fixed irrespective of our conduct.

Amid this vagueness and confusion of thought, — often aggravated by superstitious views of the divine government, — the frightful extent of maladies which we bring upon ourselves, as the direct consequences of our own misconduct, ceases to be a subject of wonder. We attribute to Divine Providence what belongs to our own improvidence. We refer to chance what flows from the violation of unchangeable laws. Oftentimes we submit passively to pain, without seeking to find antidote or remedy, when the very object of the pain is to admonish us that we have offended, and to quicken our intellect to discover in what the offence has consisted, or to apprise our moral nature of the consequences of a known disobedience. In most cases, however, the ignorant appeal to empiricism to relieve them from the consequences of their ignorance ; and thus they aggravate the evils they would remedy. An immense extent of suffering, of abridgment of human life, is regularly bought and paid for among us. A market of imposition is opened to supply the demands of ignorance ; and this must continue to be so until the people are more enlightened. Did the pretenders to medical science who infest the country in such formidable numbers confine themselves to the barbarian's practice of charms and incantations, the mischief wrought by their arts would be far less deplorable ; but, accustomed as they are to more potent prescriptions, they commit wider havoc of human health and life than the medicine-men of the savages themselves.

In regard to this great subject, the first rule, in point of authority as well as of reasonableness, is, that "sin is a transgression of the law." And the consequences of a transgression



of the physical laws are equally visited upon the *body* of the offender, whether he were acquainted with the laws or not. An infant, though helpless, and ignorant of the quality of fire into which it accidentally falls, will be consumed by it as certainly as a Hindoo devotee who leaps into it for self-destruction. In the foundering of a slave-ship at sea, the stolen victim will be drowned as soon as the ruthless kidnapper. When carbonic-acid gas enters the lungs, it extinguishes life with equal certainty and rapidity, whether the heart of the sufferer be good or evil. On this subject, therefore, the first rule, that "sin is a transgression of the law," is universal; and equally universal is the last, that "the way of transgressors is hard."

The hastiest glance at the condition in which we are placed in this life will demonstrate, not merely the utility, but the necessity, of physical education, as a department of knowledge to be universally cultivated. We are introduced, at birth, into the midst of the great agencies of Nature. Each one of these agencies is sufficiently powerful to obliterate our senses, to maim our persons, or to extinguish our lives; and yet we are profoundly ignorant of their properties and of their modes of attack. We bring into life, it is true, a certain amount of vital force, which is antagonistic to the forces of Nature; but this vital force at first is so feeble, that, if not protected against its assailants, it is subdued at once, and life is annihilated.

The chemical affinities or forces, for instance, hold perpetual combat with the vital force. Our bodies are the battle-ground where these hostilities are carried on. If the vital force be driven, for a single minute, from any part of our bodies or organs, forthwith, in obedience to the chemical law, decomposition, or mortification, commences; and, if the chemical force be not overborne and beat back by the vital force, the mortification extends, and death ensues.

And, what is more, the vital force with which we are endowed cannot be sustained, for an hour, without drawing for support upon the hostile elements by which we are encompassed; that

is, a certain portion of these elements is essential to our existence, while an excess of them is fatal to it; and, further, the result is equally fatal whether we take too much or too little. Air is a necessary of life, from the first moment of our introduction into it; and yet the extinction of life will ensue as certainly from exposing the whole body to the action of the changes and currents of air as from an entire deprivation of it. Necessary as is the air, yet if its temperature varies very much from that of the blood, either on the side of coldness or of warmth, each extreme is equally fatal. And, again, if the air is too moist or too dry, the vital organs are clogged by its humidity, or inflamed by its aridness. Drink is necessary; but, at first, the urn of life is so shallow, that a few drops in excess will sink it forever. Food is necessary: if withheld, death follows by privation; if administered too freely, death equally follows by repletion; and if of an unwholesome quality, then it becomes a poison. Light is necessary to awaken the visual sensibility of the eyes; yet too strong a beam will extinguish them forever. Sound is necessary to break the silence of the ear; yet, if too violent and shrill, it will rend the delicate organ it should only have vibrated.

Now, Nature parcels out to us no fixed, definite quantities or qualities of these elements, which are essential in degree, in excess fatal. In the course of a year, from the melting heats of summer to winter's congelations, we are carried through variations in atmospheric temperature amounting to more than a hundred degrees. Even in a single day or hour, this temperature varies to an extent utterly destructive of health and life itself, if our prudence does not mitigate its changes. It varies, too, from the extreme dryness of the north-west wind, which will extract moisture from kiln-dried wood, to the humidity of a southerly or south-easterly wind, in which a fish would hardly perceive that it was out of its own element. We are also placed in the midst of a boundless profusion and variety of materials for food, both of the animal and vegetable kinds, and these kinds are intermixed with attractive though poisonous

substances ; and yet Nature utters no warning voice when we are about to pluck and eat unwholesome fruits, nor does she stretch forth a hand to arrest our hands when we are indulging to a surfeit. Although, therefore, the vital force which we bring into life, if duly nurtured and protected, will speedily obtain immense accessions of strength, and power of endurance, yet it is always surrounded, pressed upon, besieged, by the mightier forces of Nature ; and hence not only our health and strength, but our very existence, depends upon a knowledge how to adapt ourselves to these external agencies. Neither heat nor cold, nor moisture nor dryness, nor food nor raiment, is meted out and apportioned to us as needed for our daily use and for the prolongation of life. We are left, without any revelation, to find out, by our own study, what kinds, in what quantities, under what circumstances, they must be used to yield us the longest life and the greatest power. As all the agencies and objects of Nature which surrounds us and come in contact with us are *unintelligent* in regard to our wants, if we also are *unintelligent* in regard to their properties, then we and they hold the same relation to each other as that of particles in a chaos.

In our early years, these adjustments, adaptations, protections, are left to parental knowledge and vigilance ; afterwards the responsibility is transferred from parents to offspring. But parents are deplorably ignorant. Hence they allow unhealthful indulgences. They inculcate false principles. They establish bad habits. As an inevitable consequence, sickness and suffering abound. Disease or debility of some vital organ is the common lot rather than the occasional fact. Untimely death is so frequent as no longer to excite surprise. And maladies whose pains are severer than those of death are bequeathed from parents to children as a disastrous and perpetual heritage.

Suppose any portion of our population to be as unlearned in the science of physiology as a tribe of savages, and a hundred reasons will be apparent why such portion would suffer more of disease and physical degeneracy than savages themselves. In civilized communities, there are many causes creative of disease

which have no existence in a savage state. In the former, the population is always more dense than in the latter. Hence people are crowded together in masses; and this mode of living, where ignorance prevails, is invariably accompanied with a dearth of pure air; and thus at once an indispensable constituent of health is taken away, and a prolific source of disease substituted for it. In the various processes of the arts cultivated by a civilized people, unhealthful occupations are pursued. All in-door and sedentary employments come within this description. In many branches of manufacture, noxious products of gases are evolved, which the operator inhales to the detriment of health, and often to the direct and obvious abridgment of life. Among savages, there is no painter's colic. No polisher of steel breathes steel-dust to inflame and corrode his lungs. No smelter lives in an atmosphere of corrosive gases. No preparer of beverages inhales the carbonic acid which is evolved in the process of fermentation. No savage tribe has ever reached such a depth of degradation as to render the enactment of penal laws necessary to rescue innocent and helpless children from excessive labor in factories and coal-mines. Amid the luxuries of a civilized community, the more degraded classes are surrounded by temptations always, and by opportunities occasionally, for indulging their appetites in forms of excess from which barbarians are happily exempted. All these are powerful agents for breaking down the health and constitution of those who occupy one extreme of the social scale. The other extreme is also assailed by causes hardly less potent for evil. What are seductively but falsely called the refinements of life; an ability to indulge in luxuries and epicurean diet, without any necessity for a corresponding degree of active exercise; fashions of dress in impotent defiance of climate; the conversion of night into day; systematic bodily indolence, lowering the tone of the system, and thus rendering necessary all the guards which human art can devise against those inclemencies of the seasons which ought to be braved instead of being shrunk from, — all these are mighty causes of physical deteri-

oration, from which the savage whom we pity is free. These are evils which, to a lamentable extent, characterize the civilization of the present age. Comfort has been sought so blindly as to bring a thousand discomforts in its stead. Means used to prolong life have shortened it, because adopted in ignorance of its conditions. Yet, much as these errors destroy the vigor, abridge the years, and impair the happiness, of the parents, their consequences are visited with terrible aggravation upon children.

And this is true of both the classes above referred to. Were the genealogy of families to be traced, it would be commonly found that those who occupy what are usually called, by way of distinction, the highest and the lowest grades in society, run out after two or three generations. Among the very poor, mortality is greatest below the age of five years. Among the wealthy, skill and appliances preserve their offspring through the years of childhood to perish between the ages of fifteen and twenty-five, just as the hopes and prospects of life are dawning upon them. The lineage of the poorest comes to a termination by poverty and wretchedness; that of the richest goes off in chronic and hereditary distempers, gout, apoplexy, and, especially among females, by consumption. Both are replenished from the middling classes of society, who owe their vigor and the perpetuation of their families rather to the happy fortune of being compelled to labor, to be out much in the open air, and to incur what they call exposures and hardships, than to any knowledge of those laws which they ignorantly observe, but whose observance, though ignorant, is thus generously rewarded.

Can reasons so cogent and demonstrative as these be offered in favor of the adoption in our schools of any of the other higher branches of knowledge? Here is a study upon whose cultivation the power to pursue all others with vigor and alacrity depends. Algebra and other branches of mathematics may discipline the intellect, and enable it to concentrate all its divergent forces into a focus of light, to be thrown on any par-

ticular point. Rhetoric and logic may make us acquainted with rules whereby to judge of the taste or reasonings of others, or to fashion our own. An acquaintance with the learned languages may enable us to read a few books, written in the infancy of society, before philosophy had acquired its present depth and expansion, and when scarcely any thing was known of those great civilizers of mankind, the useful arts. But an observance of the physical laws—and knowledge must necessarily precede the observance—would prepare us to enter upon any one in the whole range of studies, or upon any of the active duties of life, with tenfold capacity and ardor. Soundness of health is preliminary to the highest success in any pursuit. In every industrial avocation, it is an indispensable element; and the highest intellectual eminence can never be reached without it. It exerts a powerful influence over feelings, temper, and disposition, and, through these, upon moral character. If, now and then, as a rare exception to the general course of events, an extraordinary individual appears, who, without the sustaining power of bodily vigor, enlightens the race by his solitary contemplations, yet it is believed that such prodigies have never transmitted their powers to their offspring, and that no instance has existed where great executive efficiency has been united to intellectual or moral pre-eminence in the absence of physical health.

So, too, in the common course of nature, it is as improbable that a mother who is physically diseased will rear a healthy family of children, as it is that an immoral mother will train children to morality.

Yet, incredible as it may seem, the means of acquiring vigor, quickness, endurance, have been sought for, not by the clergyman, the lawyer, the artist, the cultivator of letters, the mother, but by the wrestler, the buffoon, the runner, the opera-dancer. There are ten professors of pugilism in our community to one of physical education in our seminaries of learning.

If opportunities for ease, and an eager competition for enervating luxuries and refinements, take possession of society,

without any corresponding knowledge of the laws of health, the race itself must rapidly deteriorate. Such a degeneracy must not only be considered as one of the greatest calamities that can befall a people, but it must be entered on the catalogue of its greatest sins. We look with abhorrence upon those barbarous tribes who practise infanticide; but they are as little conscious of the wrong of depriving their offspring of mere animal life as we are of the wrong of depriving ours of health, that is, of all the physical blessings which life affords; and an enlightened posterity may not be without difficulty in determining which is the greater offence against nature, — to relieve the impotent, the diseased, the deformed child at once, of all mortal suffering, or to rear a race of puny, dwarfish, imbecile children, the inheritors of parental maladies, doomed to suffer through all the years of their existence for offences which they did not commit, and to leave to their own offspring a patrimony of aggravated and redoubled miseries.

About seven millions, or one-half of the free white population of the United States, are under eighteen years of age. Could we allow to these only an average period of twenty four or five years, after having reached majority, how important to the country would be their condition as to health and strength! How much more important, yet how much less regarded, than if they were an army of seven millions of men! And what significancy and impressiveness does it give to the fact, that half of mankind die before reaching the age of twenty years. The amount of individual, domestic, social, and public interests dependent upon the physical well-being of this multitude, cannot be appreciated by any finite mind. It is too vast for our comprehension. We can hardly conceive of the latent power which exists even in a single healthy, well-formed infant. What a magazine of forces lies pent up within the narrow limits of its frame! What endurance, celerity, energy, achievement! As a mere material agent, a physical machine, there is something almost sublime in the idea of its hidden capacities and might. Who, without the evidence of observa-

tion and history, would be so credulous as to believe, that in the tiny, flaccid arms of a group of infant children, there were concealed such energies as could turn a granite quarry into the dwellings and temples of a city, or convert a forest into ships, or a wilderness into a garden, or almost turn the earth inside out to bring up its deep-deposited treasures for human comfort or embellishment? Yet we know that these helpless beings are endowed with innate forces which render such achievements possible and practicable; that they can not only satisfy the wants of the body, but provide in abundance for the higher wants of the soul, and, during the period of a short life, can prepare bounties and blessedness for continents and centuries.

But, on the other hand, the "glassy essence" of the child's life may be so treated that he will become more and more fragile; that he will be tormented with the pains and infirmities of disease, instead of exulting in the vigor and buoyancy of health; not able to impart aid to others, but constantly extorting assistance from them; adding nothing to the common stock, but drawing his own subsistence from it; and, instead of leaving the world indebted to him for the services he has rendered it, departing from it like an absconding debtor from among abused creditors. And, if this is so important in regard to a single individual, how vastly is this importance increased when multiplied by the number of all!

The idea is sometimes entertained, even by men otherwise intelligent, that Nature imparts to each individual a certain specific or fixed quantity of physical force; that this bestowment marks the extent or limit of ability; and therefore, when we have expended this quantity, whether more or less rapidly, we come to a point of exhaustion, which is not only natural, but necessary. In other words, the assumption is that each individual has a certain capacity; that this capacity is once filled; and, when it is exhausted, we might as well attempt to pour more than its own contents from a vessel of water, as to obtain more from the bodily system than the cubic measurement at which it was originally gauged. The same idea is sometimes



more learnedly, though with equal error, expressed under another similitude. Different individuals are said to be like so many galvanic batteries, capable respectively of generating a certain amount of force, according to the magnitude of the machine and the perfectness of its construction. This force, it is asserted, may be economized or squandered; but, with every expenditure of power, a certain portion of the machine is decomposed; and when, either by the frequency or the intensity of the shocks, the whole chemical energies of the apparatus are destroyed, we have nothing left but worthless oxides of copper and zinc.

Nothing can be more false, or more disparaging to the benevolence and skill of the Creator, than this view of our corporeal mechanism. The bodily machine has the faculty, after having given off its strength, of recovering it anew. This process it can repeat thousands and thousands of times. It is recuperative, self-replenishing, self-repairing. Each muscular effort may, indeed, be attended by a waste or loss of a part of the muscle or organ that is used; but, if the effort put forth is not excessive, that very waste is supplied by the deposit of new material which is capable of making a more vigorous effort than the part whose place it has taken. Thus we receive more than we give. The expenditure is followed, not by loss, but by accumulation; and this increase, or reduplication, may go on for fifty years without abatement.

But these wonderful resources of the body can be developed only by conforming to the laws of its organization. These laws are not an isolated system, independent of and unconnected with every thing else. They have the most intimate relation to the properties and laws of the external world. Diet, air, exercise, clothing, the changes of temperature and the vicissitudes of the seasons, light, moisture, the elevation or depression of different localities, come within their purview. With every new combination of circumstances, the law is modified, or, rather, a new law applies to the case. The practical application of the law, therefore, is a matter of adjustment, proportion, fitness, relevancy, — that is, of KNOWLEDGE.

Although the proofs from which these views are derived are abundant, and obvious to every intelligent observer, yet I am desirous of corroborating my own opinion by testimony in which the public will repose undoubting confidence. For this purpose, I here introduce a few letters from eminent physicians whose characters are a guaranty for the correctness of their statements. The circular to which the letters are a reply is prefixed.

## CIRCULAR.

To ———.

*My dear Sir,* — Ever since I became at all acquainted with the laws of health and life, I have had daily and hourly occasion to lament the unnecessary as well as immense loss which is suffered, by individuals and by the community, in consequence of the violation of those laws.

The loss consists in the personal suffering of many, with its attendant expenses, in the impaired ability for usefulness of a still larger number, and in the premature death of a vast majority of mankind.

In looking at these calamities with a view to their prevention or diminution, it seems to me important that a distinction should be made between those transgressions of the law which arise from ignorance merely, and those which are committed by yielding to the impulses of inordinate appetites. For the prevention of those which flow solely from ignorance, mere knowledge will be an antidote; but, to prevent those which punish the improper indulgences of appetite, some change must be effected in the moral condition of the patient. Even in the latter case, however, a clear knowledge of the benefits naturally resulting from an observance of the laws of health and life would come powerfully in aid of a moral reformation.

I am aware that there is a class of cases which do not fall exclusively under either of these heads, — cases which may be called *mixed*, because they include a surrender to the dominion of appetite, notwithstanding certain vague and obscure notions — a sort of half-knowledge — of injurious consequences. If, however, even in this class of cases, that which alone is entitled to be called *knowledge* — that is, a clear, vivid perception of the consequences attached to an act — would have saved the victim, I see not why such cases should not be arranged under the head of evils resulting from ignorance.

From a retrospect of your extensive medical practice, and from your observations on health and longevity, I trust you will be able to arrive at, or at least to approximate, some pretty definite conclusion respecting the *proportion* of sickness, physical disability, and premature death, which may be fairly attributed to an ignorance of physiological principles already discov-

ered, and which most persons would avoid if proper attention were paid to early education and habits. Or, in other words, in the present state of the science of physiology, how great a *proportion* of disease, of suffering, of a diminution of the physical capacity of usefulness, and of the abridgment of life, comes from sheer ignorance (as contradistinguished from that which proceeds from causes not known, or from inordinate indulgences), and which, therefore, we might hope to see averted, if the community had that degree of knowledge which is easily attainable by all.

By so doing, I think you will furnish a powerful argument in favor of making those conditions on which health and life depend a subject of study, not only for adults, but especially for the young; and, in order to reach the latter class as extensively as possible, you would prove the expediency of introducing the study of physiology into our common schools, after the primary studies have been mastered.

Should you do me the favor to reply to this letter, I hope you will not think yourself confined within the narrow outline I have sketched, but will extend your remarks to any topics which will subserve the two great objects I have in view, — namely, the prevention of suffering, and the increase of the physical capabilities of the community.

Very truly yours,

HORACE MANN,

*Secretary of the Board of Education.*

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#### LETTER FROM DR. JAMES JACKSON.

HON. HORACE MANN.

*My dear Sir,* — I agree with you entirely as to the lamentable evils which arise from the violation of the laws of Nature in regard to health and life. You will add much to the benefits you have already conferred on the rising generation, and on the community, if you cause to be instilled into the young a knowledge of the value of health, and of the means of preserving it.

The evils you describe are undoubtedly, in many instances, incurred from ignorance. An acquaintance with the functions of the living body, and with the causes which influence those functions for good or for evil, would have a great tendency to prevent such evils. But the proportion of cases in which ignorance alone, "sheer ignorance," is the cause of disease, &c., is not perhaps so large as you are disposed to believe. By far the greatest proportion of cases in which the health is injured, and life is shortened or rendered useless, unnecessarily, consists of the cases you call

"mixed." Ignorance has a share in producing them, a greater or less share, but is not the sole cause.

You now ask in how great a portion of all the cases of sickness, impaired health, &c., ignorance is either the sole cause, or co-operates with other causes in producing the result. I find it impossible to give a very precise answer to this inquiry; but I feel assured that the answer should be, *more than one-half*. When it is brought to mind that the ignorance of parents is included in the terms of the inquiry, the justice of the answer will probably be admitted by all who are conversant with the subject.

The first great difficulty in the young, and often in those who have passed their youth, is, that they are ignorant of the value of health. They may acknowledge in words, but they do not realize, how much the enjoyment of life is abridged by ill health. Still less are they aware how much the usefulness of one's days may be impaired by disease, or even by chronic ailments, which are scarcely called diseases. While men desire long life, they too often disregard the importance of being able to use all their powers and faculties unimpaired during the years they do live. The first thing, therefore, is to make the young understand that they should endeavor to cultivate and maintain all their powers, and be ready to bring them into healthy exercise at all times. To this end, they must learn, not only to be properly equipped for the warfare of life, but also not to take on the burdens of bad habits, which will impede them in their march.

If these views of the importance of sound health be presented clearly and fully to the young, they may then be desirous to learn the art of living well. Teaching principles alone will not insure the practice of this art, but it will promote it. The study of Physiology will lay the foundation. To the common student, who does not intend to devote himself to medicine, it would suffice to learn the great or most important functions of the human system, — such as those by which we convert our nutriment into blood, and, distributing this to the various parts of the body, form from it the various solid and fluid substances; those by which we carry off the useless materials by the various emunctories; those by which we recognize the existence and qualities of the material things around us; and those by which we perform the voluntary motions. To these might be added the changes which the body and mind undergo from infancy to old age, the mutual influence of the mind and body on each other, and perhaps some others.

A general acquaintance with the matters thus described, which might be illustrated by demonstrations to a very limited extent on brute animals and plants, could, I think, easily be communicated to young people from fourteen to sixteen years of age. But this instruction in physiology would not be enough. It should be followed by instruction in hygiene. This is the branch of medical science which regards the preservation of health and the attainment of long life. Rules on this subject may be given to those

who are ignorant of physiology; but the subject can be presented much more advantageously to those who are not ignorant of it.

The advantages of such instruction as we have in view may be doubted by many persons. I would not exaggerate those advantages, nor hold out expectations which may be disappointed. I should not look for a marked change in the habits of society in any short time. But, as knowledge of this kind becomes diffused in the community, there would probably be an increased desire for it; many of the thoughtful would continue to study the matter as they were growing up; and future mothers, at least, would be anxious to apply their learning for the benefit of their children. If they would do this successfully, the generations which are to follow us would be rising in the scale of physical well-being at least. I say physical well-being at least; but I have a full conviction that there would be some corresponding moral improvement. The tendency of physical health, attained by well-trained habits, must, I think, promote that manliness, that virtue, which enables men to keep in the paths of rectitude. There would be fewer of those deviations which one excuses to himself by saying he could not help it. At any rate, some of the evils of life might be mitigated or averted. Meanwhile, the studies proposed connect themselves readily with other branches of natural history. How useful, how beneficial to the mind, are all branches of natural history, I need not say to you. Perhaps I owe you an apology for having been led off so much from the immediate object of your inquiry.

I am, dear sir, with sincere respect,

Your friend and servant,

JAMES JACKSON.

Dec. 16, 1842.

#### LETTER FROM DR. S. B. WOODWARD.

STATE LUNATIC HOSPITAL, WORCESTER,

Jan. 2, 1843.

HON. HORACE MANN.

*Dear Sir,* — I have received your late letter, and improve the earliest opportunity to reply.

From the cradle to the grave, we suffer punishment for the violation of the laws of health and life.

In infancy, mismanagement, arising from ignorance or neglect of these laws, not only destroys many lives, but impairs the health of thousands who survive, gives bad development to organs essential to life, and entails the elements of disease and death upon them.

The more common errors are, bandaging the body and hands, neglect

of cleanliness, hot beds, hot and ill-ventilated apartments, bad clothing, covering some parts too much and too closely, and others too little or not at all; bad food, too much feeding, and especially administering drugs for those slight indispositions which, in a short time, would be removed without remedies, &c. Thus the infant is subjected to suffering, to disease and death, before it is responsible for a single error.

The exposures, imprudences, and evil habits of the young are the causes of many of the diseases of that period of life, particularly of CONSUMPTION, the great destroyer of this most interesting portion of the human family. Many of the victims of this disease have an hereditary predisposition transmitted from parents, and also feel the influence of a neglect of proper training in the periods of infancy and childhood.

As far as I have known, the educated and wealthy classes of society manage their children with less regard to the natural laws of life than the common-sense yeomanry of the country. They are less healthy, less robust, and die prematurely in greater proportion.

The *former* restrain from active pursuits, and pamper appetite too much, often preferring delicacy of appearance to vigor of health; and by this mistake they bring suffering and disease upon their offspring, which is felt in all after-life.

The *latter*, by encouraging activity, and simplicity of diet, insure for their children vigorous health, a power of repelling the causes of disease, and of throwing off disease when it attacks them.

Considering the many errors which we adopt, and adhere to in life; the many imprudences of which we are guilty; the hazards we run, and the exposures which we voluntary make, which are rash and unnecessary,—it is not surprising that a large proportion of our suffering, and the premature deaths which take place in the community, are ascribable to violations of the natural laws of life and health.

Death from old age is rare. Many of the aged die of acute disease, which almost always arises from imprudent exposure, and violation of the laws of health. Many such persons have sufficient general vigor to hold out much longer than is common; but the ravages of disease upon one organ destroys its functions, the system succumbs to local causes, and death follows.

I have no doubt that *half* the evils of life, and *half* the deaths that occur among mankind, arise from ignorance of these natural laws, and that a thorough knowledge of them would diminish the sufferings incident to our present state of being in very nearly the same proportion.

Yours very respectfully,

S. B. WOODWARD.

## LETTER FROM DR. EDWARD JARVIS.

CONCORD, MASS., 13th December, 1842.

TO THE HON. HORACE MANN.

*My dear Sir,* — Yours of September I received in due time, requesting my opinion of the proportions of disease caused by ignorance of our organization and physical powers, or from neglect of this knowledge. My records and data on which I could found a more accurate opinion are in Kentucky; and therefore I have hesitated until now to give any answer.

From an observation of thirteen years, I have been led to believe that *three-fourths, perhaps more*, of the ailments of men come from a want of sufficient knowledge of their frame, or a disregard for it.

Considering how men are educated to view life, — the body, its organs and powers, and their relation to external nature, — it is not at all surprising that this should be so. Out of the ignorance of anatomy and physiology have grown two radical errors: —

1st. The body, its faculties and powers, are supposed to have an indefinite capacity of endurance, both of use and abuse; and hence have arisen innumerable disorders.

2d. Diseases, derangements, injuries, are, in some way or other, supposed to be the direct acts of Providence, moving in a mysterious way, and not to come from human agency, — from our neglect or misuse of Heaven's gifts.

"Diseases are thy servants, Lord;  
They come at thy command,"

is more than an adjuration of the pious poet; it is too much a common faith: and therefore we are not taught to use the means in our hands, nor made to feel our own responsibility for the preservation of our health.

To say nothing of those disorders that come from dissipation, I believe that the whole chapter of accidental injuries is caused by violation of the natural laws, through ignorance often, through temerity oftener, and, in most cases, for want of that care which is usually given to the preservation of property.

The ordinary diseases of the human body, — fever, consumption and inflammations, and derangements of the digestive apparatus, nervous system, &c., — though not so palpably the consequences of the violations of the laws of our members as what are called accidents, yet I doubt not that most of them can be charged remotely or directly to these errors.

The earth was given us by a generous Providence for our habitation. Our organs and their functions, and the necessities of our frames, are perfectly fitted to external nature. Between the wants of the animal body and the elements there is a beautiful harmony. For every need of our organs or our life, God has created an abundant supply. Some of these things

are supplied to us all ready for use, — as the air for the lungs and respiration, the light for the eye, the water for drink; other things are given us in the raw material, unfit for use. But then we have intellect given us to perceive the powers and worth of these, and their convertibility to such shapes or combinations as our bodies may require. We have also hands to do this work; and thus has our beneficent Creator provided for our clothing, our shelter, our food, and our exercise. So far, mere life is maintained. But this is done in the best manner by the use of every faculty and organ; for the exercise of every one of these is not only necessary for its own development, but for the health and energy of all the rest.

By the faithful and discreet use of all these means and powers, — by not corrupting the air we breathe nor the water we drink; by suiting our food exactly to our powers of digestion and to the wants of nutrition; by adopting our clothing precisely to the temperature, and the power of the body to sustain atmospheric changes; by protecting ourselves, by house and by fire, from the elements; by a proper exercise of all our faculties, neither timid nor rash, neither abusing nor exhausting them, nor letting them rust from neglect, — we may probably live to a good old age, and avoid many, if not most, diseases. Certainly we may thus escape all accidents, and very materially prolong life on earth.

This requires much study and continual observation, —

1st. To understand the structure of our bodies.

2d. To know the relations of our organs to the external world.

3d. To learn the use and extent of our faculties.

Herein lies our fundamental deficiency. We want the proper knowledge to begin with, and a habit of observation afterwards. Consequently, we have a world full of almost innumerable diseases, and premature death comes upon most men. Hence, in Boston, from 1811 to 1839, instead of holding on in a life of vigor until finished by the exhaustion of old age, from thirty-three to forty-three per cent of the population died before they passed their fifth year; and less than seven out of one hundred reached their three-score and ten. In Concord, twenty-two per cent died under five years, and eighteen in every hundred passed their seventieth year. The average duration of life for the last thirteen years was only thirty-seven years and five months; and even this period was far from being a perfect life, for the whole catalogue of diseases was fastened upon this brief earthly space.

A careful observation shows how this happens, considering the complicated structure of our bodies, the almost infinite variety of circumstances that may affect them for good or for evil, and the perpetual necessity of adapting the material, the support and food of life, to our organization. I believe that men give less time to the study of the laws that govern these matters than they do to the regulations of their animals or their machinery, which contribute to their profit or pleasure.

I can explain this better by examples.



I was long in the habit of attending, in way of my profession, upon the family of a very sagacious farmer. He always lived with his eyes open, and was a keen observer of every thing but his own frame. Hence he was very successful in raising pigs and managing cattle. He carefully watched the effects of the food, and varied it to suit the appetite and health of his animals. Meal, potatoes, corn, pumpkins, boiled or raw, mixed in every proportion, or singly, were prepared and changed, just as he saw that the hogs would thrive the best and fatten the fastest. Hay, corn, oats, meal, roots, cut-hay, these were given to his oxen and horses according as he noticed the effects on their strength, spirit, and power of endurance. For these purposes, he had no fixed principles or inflexible habits; but his daily observation of the effects of food was his law of permanence or change.

He told me once, rather incidentally than otherwise, that for a year or two he had suffered much from heart-burn, or acid stomach. He felt it some after breakfast, and so much after dinner as to impair his energies, and sometimes so severely as to prevent the possibility of labor. On some days this was very distressing. But he very rarely had this pain in the evening. On inquiry, I discovered that he ate brown (rye and Indian corn) bread for breakfast, and the same more plentifully for dinner; but for supper he ate wheaten bread. Occasionally, he had Indian-pudding at noon, and then his stomach suffered the most distress. The same attention to the effects of his own diet that he gave to the effects of their food on his cattle and hogs would have detected this error in its very beginning, and might have saved him many months of suffering. But, when I proposed the change, he hardly comprehended the necessity.

I know of some men who make it a rule to work their horses at the top of their strength, using them only in their fullest flesh and spirit, and resting them before much fatigued. But they work themselves at the bottom of their strength. If they rest, it is only when nearly or quite exhausted; and they return to action as soon as they gather power to crawl to their labor.

There are two opposite principles or notions somewhat common, both warring against health, interfering with the vital energies, and rendering the human frame more or less susceptible of disease.

*First.* There is a sort of stoicism relative to food, labor, and self-sacrifice. Men under the influence of this feeling eat every thing that is set before them, of whatever kind, and however prepared, whether it suits their digestive powers or not. To think any food that is offered them is indigestible, and therefore unsuitable to them, to request any change on their account, savors to them of childish fault-finding, and of unmanly selfishness. With the same feeling, they go through every variety of labor and exposure to which business or pleasure, duty or kindness, may call them. Through fatigue, through severe cold, storm, or heat, they run and toil, forgetful of the animal machinery by which they move, and regardless of the influence of the elements or over-action upon it. Of course, these feelings

and habits must open the way to digestive disturbance in some, and to colds, rheumatisms, fevers, &c., in others.

*Second.* There is often precisely the reverse feeling, — a selfish regard to appetite and comfort. Governed by this, some eat more for appetite than for nourishment. They regard good eating, but not good digestion. They swallow crudities, perverse cookeries, and absurd mixtures, provided these please the palate; but the poor stomach is forgotten. Others err by the quantity of their food: they thus over-tax their digestive powers, and often derange them. If not this, they are stupid and sleepy after eating; their activity of life is for the time suspended, because all the nervous energies are absorbed in aid of the over-tasked stomach.

The selfish regard to personal comfort, which avoids the exercise of some or of many of the organs or powers, and thereby leaves them feeble; which abhors the ordinary exposures, and thus renders the body incapable of enduring the changes of temperature which it must sometimes meet, — this, in various ways, disarms the system of much of its vital energy, prevents the full development of life, and reduces the power of resistance to those influences which are apt to engender disease.

There is one other important evil following from this ignorance of the laws of health; that is, a total misconception of the nature and location of disease, and, therefore, a want of a guide to the way and means of recovery; and many, in attempting to attain this, carry their bodies through all sorts of experiments, even those of an opposite nature, to cure the same disorder. On the other hand, every sort of disorder is submitted to the same experiment, as if every possible combination of derangement and of remedy would produce one and the same result of health and strength. Hence arises quackery, which is the natural fruit of popular ignorance upon the subject in which it pretends to operate.

One man advertises that all diseases are primarily in the blood, and for this state of things he has a certain remedy. He finds many people, with all kinds of ailments, to believe him; and they gladly try his method upon themselves. Another rises, and declares that all diseases originate in the liver, and straight the former patients change their faith: with no change of symptoms or evidence, they suddenly cease to believe their various derangements come from the blood, and become convinced that they proceed from the liver, and take the corresponding medicine. From the liver to the stomach, from the stomach to the nerves, their ignorant credulity bandies about their fickle faith, while their poor frames endure all the trials of ignorance, and their impoverishing purses pay all the cost.

The remedy for all this is in a better education. If our people were as well taught the organization of their bodies as they are the structure of a clock or a wagon; if they understood the uses, powers, and limits of the animal frame as well as they do the objects and capacities of machinery, — they would make a much more faithful use of their health and strength, and save themselves from many diseases

For this purpose, our children should be taught in school the law of their members, as early and as carefully as they are taught geography or philosophy. Anatomy and physiology should be studied, not as barren facts, but as a law for their government. They should have it impressed upon them as a conscientious duty to take care of their health, to develop and preserve their powers of life in their fullest energy. They should feel that they have no more right to impair or diminish or pervert or waste this life by negligence, by misuse, or by over-exertion, and thus commit fractional and gradual suicide, than they have to put an end to it by a blow in complete suicide. Both of these are violations of the same law of society, of nature, and religion. They differ in degree, but not in kind.

Every child, then, should be first taught the nature of his own bodily machine, and the relation of this to external objects. Then he should be made to feel a conscientious responsibility for its faithful use. Upon himself it must depend whether this shall give him the highest uninterrupted pleasure, or the greatest pain; whether it supply him with wealth more than all other means, or involve him in hopeless poverty.

Very truly and respectfully yours,

EDWARD JARVIS.

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#### LETTER FROM DR. M. S. PERRY.

Boston, Oct. 25, 1842.

DEAR SIR, — I received your letter of Sept. 23, in which you propound to me the following question: "In the present state of the science of physiology, how great a proportion of suffering, of disease, of a diminution of the physical capacity of usefulness, and of the abridgment of life, comes from sheer ignorance, and which, therefore, we might hope to see averted if the community had that degree of knowledge which is easily attainable by all?"

To this question, I regret to say, I cannot give any definite answer; but I have taken pains to record the exciting causes of disease (as far as they could be ascertained) in fifty cases which have come under my care since I received your letter, and in twenty-five more which, within the last two months, have entered the Massachusetts General Hospital. These last were recorded by the resident student. Some of those that came under my care were children; but I thought I would take fifty successive cases without reference to age. Those that entered the hospital were adults.

The result is, that more than half of the fifty cases were induced by causes which might have been avoided if the individuals had understood the laws of health; for I may safely say that not one of them did understand those laws.

The cause of sickness in fourteen of the cases received at the hospital was ascertained. They were exposure to wet and cold, fatigue, and want of exercise. Of the other cases, whose cause was not known, it is but fair to suppose, from the nature of the diseases, that more than half of them arose from similar causes. Allowing this supposition to be correct, we shall have more than three-quarters of the twenty-five patients made sick by causes which might have been avoided if they had possessed the requisite knowledge, and been placed under circumstances where they could have applied it.

I think a large majority of the patients that come under the care of physicians are made sick from the following causes: Exposure to atmospheric changes, excess in eating and drinking, fatigue, impure air, and want of exercise. Now, in order to avoid these exciting causes of disease, an individual should not only understand the laws of physiology, but the influence of physical and moral agents. Important as these subjects are, I will venture to say that not one individual in a hundred amongst us does understand them; and if you can direct the attention of the community to them, and induce them to introduce the study of these sciences into our Public Schools, you will confer a great blessing upon the present and future generations.

It is generally supposed that there has been, within the last few years, a decrease in the annual mortality in this city. But in a paper lately written by S. Shattuck, Esq., on the vital statistics of Boston, he says, "The average value of life is greater now than during the last century, *but not as great as it was twenty years ago. It was at its maximum from 1811 to 1820; and, since that time, it has somewhat decreased.*" He also says, "*It is a melancholy fact, and one which should arrest the attention of all, that forty-three per cent, or nearly one-half, of all the deaths which have taken place within the last nine years, are of persons under nine years of age; and the proportional mortality of this age has been increasing.*"

W. R. Gray, Esq., in a paper published in the last number of "The Statistical Journal," says that the rate of annual mortality has increased in England, since 1820, ten per cent, and probably twelve and a half. These facts show the importance of directing public attention to the causes of disease, in order, if possible, to avert a still greater annual increase of suffering and death.

Respectfully yours,

M. S. PERRY.

HORACE MANN, ESQ.

This list of authorities might be indefinitely extended. Many personal interviews with eminent members of the medical profession have confirmed my belief in the above conclusions. But,

to any one who understands even the more obvious principles of physiology, the evidence which is inherent in the nature of the subject supersedes the necessity of extrinsic proof. Yet thousands of the more advanced scholars in our schools are engaged in studying geometry and algebra, rhetoric and declamation, Latin and Greek, while this *life-knowledge* is neglected. Having passed through our Public Schools, through select schools and academies, without ever having had their attention turned to the great science of health and life, our young men and women, who are, or who are soon to be, the fathers and mothers of the next generation, devote their leisure time to the reading of novels and the other bubble literature of the day, and neglect that knowledge on which so much of personal and almost all of domestic happiness and hopes are so obviously founded. In the fallacious tranquillity of ignorance, pernicious indulgences are yielded to, indispensable observances are omitted, unhealthful habits are formed; and, as the inevitable consequence, debility or sickness ensues, old age is antedated, feeble parents are succeeded by feebler children, the lineage dwindles and tapers from less to less, the cradle and swaddling-clothes are frequently converted into the coffin and the shroud, occasional contributions are sent off to deformity, to idiocy, and to insanity, until, sooner or later, after incredible sufferings, abused and outraged Nature, finding all her commandments broken, her admonitions unheeded, and her punishments contemned, applies to the offending family her sovereign remedy of extinction.

Considering, then, the paramount importance of this subject, it seems to me desirable that it should be commended to the favor of the public, not merely by argument and the authority of distinguished names, but by a presentation of some of its leading and most essential doctrines. The duty of prescribing text-books, and of regulating the studies in our schools, is devolved by the Legislature upon the school committees. These committees are chosen annually by the people. The people, then, are to be reached, — not by coercion of law, but by per-

suasion and conviction. And I am so well satisfied that the people of Massachusetts are competent to understand and appreciate the preponderating merits of this study, and that, to ensure it priority over any and all others of the higher branches pursued in our schools, it only needs to have its claims presented before the tribunal of an intelligent public opinion, that I propose to occupy the residue of this Report with a brief outline of the more obvious principles of physiological science, and of their practical bearing upon the great interests of health and life.

What we are accustomed to call the Human System is a *variety of systems*. It is not one, but many. Between these different systems, there is the most remarkable diversity of appearance, structure, functions, uses; yet all are harmoniously associated together for the formation of a complex whole.

✓ 1. In the first place, as a foundation and framework for all the rest, there is the Osseous or Bony System, consisting of about two hundred and forty different pieces. A great portion of these are levers. They are adapted to raise weights, or to overcome other resistances. Had the farmer and the manufacturer, or the mechanic of any kind, a mind properly instructed on this subject, how elevating and delightful it would be for them to trace analogies and resemblances between the laboriously-wrought utensils and instruments which they use, and those similar but more perfect instruments, which, by the benevolence of God, grow unconsciously into symmetry and strength, and operate with such precision and celerity in their own bodies and limbs!

Some of our bones are not levers, but defences; and some serve the double purpose of a defence for what they contain, and as a centre of motion for some other parts; yet all of these grow where they are needed, — of the requisite size, form, solidity, strength, — without oversight or direction of ours, so that, when we wake up to consciousness of our formation (if we ever do wake up to that consciousness), there we find these solid portions of our frame, each fitted to its appropriate place,

and each performing its assigned duty, according to the benevolent intentions of its Divine Architect.

2. There is the Muscular System. This is wholly different from the osseous or bony. The one is solid and almost unbending; the other pliant, flexible, elastic. The muscles are fastened at each end to some bone, or some organ intended to be moved by them. They all have the power of contracting themselves, that is, of diminishing their own length; and, by so doing, they bring their extremities nearer together, and thus cause motion. If the bone to which one end of a muscle is attached is a fixed point, then the whole motion is communicated to the organ or part to which the other end is fastened. Such is the case with the muscles of the eye, — one end being attached to an immovable bone, and the other to some part of the eye-ball; and thus all its variety of motions, whether to the right or left, upwards, downwards, or obliquely, are effected. The infant uses all these muscles, and is excited to emotions of wonder and delight by the visible objects which surround him, before he knows that he has either an organ of vision, or muscles to direct it. This is not to be wondered at; but it is to be wondered at, that so many persons go through a long life as ignorant as an infant of these beautiful facts. In the human body, there are said to be between four hundred and forty and four hundred and fifty different muscles. With these, all the myriads of different motions of which we are capable are performed. The muscles overlay, interlace, and cross each other in all directions; and yet so admirable is their arrangement, and so exquisite the skill with which they are fitted to play upon each other, that their whole work is done without perceptible friction and in absolute silence. What machine or mill made by the art of man, consisting of more than four hundred bands or cords, moving more than two hundred solid pieces, and having the requisite number of joints and pullies, was ever so skilfully constructed as to move *inaudibly* for fifty or seventy years? In the most rapid and dexterous operation which an artisan ever performs; when the tool, which he grasps

in one hand to fashion the material which he holds in the other, moves with such velocity as almost to elude eye-sight, — neither the tool nor the material has half the motions, which, at the same time, are taking place in the muscles of the eye and hand of the operator. Yet the work of man we admire, while, our whole lives long, we regard with stupid indifference the work of the Creator.

3. Next in order may be mentioned the Nervous System. Of this system, the grand, central body is the brain, which is a mass or congeries of nervous matter. The brain sends off nerves to each of the five senses, and to every part of the body. The pairs of nerves which go to the eye, the ear, and the organs of taste and smell, pass to their points of destination by the shortest convenient route. Through these media the mind holds intercourse with the external world. It is along these lines of communication that impressions from outward objects are transmitted inward, and that each different property of color, sound, odor, taste, makes itself perceived in the dark and silent chambers of the brain. A few years ago an apparatus was invented in England, which consisted of bundles of metallic wires, several miles in length, each wire being carefully wound round with some covering impenetrable to moisture, and the whole placed under ground to secure them from injury. At each extremity of these wires there was a system of corresponding signs; and the apparatus was so adjusted, that, by means of galvanism, any motion produced at one end of the train would write out its corresponding and intelligible sign at the other. In this way, information could be communicated along the whole track with the speed of lightning. The invention attracted great attention from the learned. Something of the kind has lately been projected in this country; and perhaps, at a future period, it may be improved, and applied to purposes of practical utility. But what is this compared with the optic nerve, which, although only two or three inches in length, makes known to us the existence of objects, however magnificent or minute, with all their variety and splendor of coloring,



alike whether they are within the reach of our fingers, or whether they are stars in the depths of immensity? Yet we accord our admiration to the mechanism of man, but, through general ignorance and stupidity, withhold it from the infinitely greater skill of the Maker of man.

With what a variety of sounds does the nerve of hearing — a little soft cord two inches long, and not larger than a straw — make us acquainted! No arithmetic can compute the number of sounds which come from the hum or chirp of insects; from the song of birds; from the occupations, the speech, or the music of men; from the voices of animals; from trees and streams; from the ocean and the air; and yet with what facility and distinctness does this bit of nervous matter communicate the whole to the mind, so that we can readily assort or unravel these sounds, and refer each to its true origin! and all this is effected without any artificial change of stops or keys.

If we admire a single instrument of many strings, or a cathedral organ with its many pipes, what ought we to think of that minute contrivance, the ear, which, within a space of less than one square inch, vibrates to every sound in the vast orchestra of Nature!

By far the largest branch of nerves which the brain sends off passes down in the interior or hollow of the spinal column, and is thence distributed to every part of the body. This branching, or ramification, of the nerves is inconceivably minute. They penetrate all parts of the frame, and stand as sentinels at every point, to warn us of the approach of danger. There is no spot on the surface of the body so minute that we can touch it with the point of the sharpest needle, without striking we know not how many of these nervous filaments, which immediately give us notice of the aggression. In fineness, as compared with the nerves, a spider's web or the thread of a silk-worm is as cord or cable.

But the nerves which descend along the interior of the spine, though alike to the eye, to the touch, or even to any chemical test, are wholly different in their functions. That part of the

branch which occupies the posterior or back side of the column is appropriated to the transmission of sensations to the mind. They are the nerves through which we *feel*. Those, on the other hand, which occupy the anterior or front side, are nerves of motion, — those by means of which we *act* or *move*. If the nerves of *motion* were cut or broken off at any point, all parts of the body below the point of separation would lose the power of motion; and, therefore, though the extremest pain from laceration or burning were suffered in any part dependent on those nerves, yet we should be unable to escape or withdraw from it. On the other hand, if the nerves of *sensation* were destroyed, our feet or hands might lie in the fire and be consumed, without our feeling any sense of pain as a warning to remove them. The rapidity with which communications are made along these thoroughfares is amazing, being equalled only by that of light, electricity, galvanism, or other of the impendable bodies. If a man in a crowd feels the heel of another beginning to press upon his foot, the intelligence is forwarded to the brain along the nerves of sensation; and forthwith an order is despatched from the brain along the nerves of motion for the removal of the foot out of harm's way. If the person enjoys good health and has ordinary quickness, the information will be transmitted to the brain, and the order sent back to the foot in sufficient season to save it from injury. This process takes place in all cases when the hand is exposed to be burned by any heated substance, whether solid or fluid. The attention of thousands has been arrested by the celerity of movement with which the hand has been withdrawn from contact with a basin of hot water or a hot shovel, who never knew or thought of the wonderful mechanism by which, in the momentary interval between the touch and the escape, a message had been sent from the hand to the brain, delivered, considered, and an answer, exactly adapted to the exigency of the case, forwarded to the scene of action by another post-route, in season for the removal of the endangered member. In the case of the juggler, the tumbler, and the rope-dancer, with what inconceivable

velocity and frequency must the couriers of the mind pass up the nerves of sensation with their intelligence, and down the nerves of motion with their orders!

There is still a third set of nerves, which are connected with the *involuntary* motions of the vital organs, — with the beating of the heart, with the motions of the stomach in digestion, of the lungs in respiration, &c.

4. Again: there is the digestive system, by which the crude and heterogeneous masses that are taken as food are broken down and dissolved in such a manner, that they can be carried by the circulatory system to every part of the body, — to become, in one place, bone; in another, muscle; in another, brain; in others, hair or teeth or skin; here to suffuse the cheek with the beautiful hues of health, and there to light up the eye with the fires of intelligence.

5. Another system is that of the blood-vessels, or of the circulation. It was said above that no part of the surface of the body could be pricked with the point of the finest needle, without striking a nerve; and this is equally true in regard to the blood-vessels; that is, both the nerves and the blood-vessels lie so closely side by side, that a needle cannot find any unoccupied space or interstice between them. Although the whole blood of the system pours through the heart, and issues forth from it into the aorta in one great stream, yet this stream is afterwards so minutely subdivided as to reach every part of the body. Not the space of a pin's point is deprived of it; for, if the blood should cease to nourish any part, that part would immediately perish with mortification. Hence the current must have its winding passages, its arches, its culverts; and, when it reaches the bones, it must descend into them, as by subterranean channels, to permeate and nourish their solid structure. Nor does this process of circulation consist, as we are accustomed to suppose, in the mere flowing round and round of the same fluid. The blood carries nutritious particles as its freight, and every point in the whole body is a port where it unloads its treasures; and, in return, it receives the waste or used-up

particles, which every part of a healthy body is constantly throwing off.

Besides all these there are the lungs, or the respiratory system, the systems of absorbents, lymphatics, secretories, excretories, &c.,—all going to make up that one mechanism, which with brevity we call the human system. Physiologists enumerate more than twenty of the elementary or compound tissues of which the body is composed.

But what I mainly aim at here is to direct attention to the differences which obtain amongst all these component parts, and, therefore, to the necessity of some knowledge of each. How entirely unlike each other, both in structure and function, are the solid and fluid portions!—the bones and the blood, the opaque muscle and the transparent humors of the eye, the vegetative and almost insentient hair, and the keenly living nerve, the stomach which is the principal organ of digestion, and the lungs which are the principal organs of respiration. One thousandth part of what we daily take into the stomach would kill us instantaneously if taken into the lungs. What is indispensable to the lungs would extinguish life in a moment if taken into the blood-vessels. And so of the rest. The truth of practical importance to be noted here is, that each system not only has its peculiar uses, but its peculiar diseases, and therefore needs its peculiar care. The hard and cohesive bones are liable to become either brittle or soft. The softer parts, the heart, for instance, are liable to ossification, which is only a bone made in a wrong place. The muscles are attacked by rheumatism and spasms, the lungs by consumption, the liver by hepatitis, and the digestive organs, which in this country are abused more than any others, by a host of maladies greater than any other.

Hence the necessity of our knowing each organ and its functions; for how can one wisely superintend a complicated machine who is only acquainted with one, or with but a few, of its parts? All these various systems are brought together, compacted, and harmonized into one. Within the narrow com-

pass of our frames are collected, and placed side by side, all contradictory and conflicting elements, — earthy matter which will not burn, and phosphorus which takes fire by exposure to the open air ; oil and water ; fire and water ; acid and alkali ; solid and fluid ; vegetable and animal ; iron, and the oxygen that corrodes it. And these are not only made to agree, but to co-operate ; they are not merely tolerant of, but essential to, each other. Each, however apparently hostile, is indispensable to the well-being of all the rest. Such are the wonderful ingenuity and marvellous adaptations of a mechanism, respecting which, though our life and welfare are dependent upon it, we are content to remain in profound ignorance.

What but an ignorance of the plurality of our vital organs can account for the fact that men are so heedless of an attack upon any one of them, because the rest are in a sound condition ? An ambitious student thinks little of an over-excitement of the brain, because, as he says, he is perfectly well in other respects, — his digestion is good, his lungs are sound, his muscles are strong. But when the over-working of the brain brings on inflammation, and this matures into insanity, of what avail, then, is his good digestion, or his sound lungs, or his strong muscles, but to render him a more formidable and destructive madman ? A mother is subject to colds and coughs ; but her appetite is good, her nervous system is steady, and her mind clear. Why should she be alarmed at occasional pains in the side ? But when successive exposures prolong a cold into a permanent inflammation, and consumption follows, every vital part, however vigorous before, must perish with the lungs. And so of each of the many vital organs on which life is dependent. We retain existence only on the condition of taking care of them all. We talk about *the seat of life*, as though the vital principle had some *one* fortress or citadel, by the defence of which our existence would always be safe. But life has no such *one* citadel ; or, if it has, it is assailable through a hundred gates, at any one of which death may enter and expel it.

The various systems of the body are not only designed to work harmoniously together, but, in a healthy and proper child, they are endued with proportionate and corresponding energies: they are pre-adapted to last and to work for equal periods of time. The stomach was not made to last for ten years, and then to break down, the lungs for twenty, the heart for thirty, and the brain for forty or fifty, and so on; but an identical term of existence was imparted to all, so that they might run on in the race of life together, and come simultaneously to their goal. Yet, owing to our ignorance and mismanagement of ourselves, and especially to the mismanagement of children by ignorant parents, one or another of these great vital organs is destroyed while the rest are in comparative health and vigor; or some two organs, by different abuses, incur diseases which require incompatible remedies, so that what is done to cure the disease of one aggravates that of the other. Not one individual in a hundred, in our times, dies of old age, — that is, after each of the vital powers has expended its quantum of force, and when the whole sink together to a peaceful close. In more than ninety-nine cases in every hundred, death is a terrible struggle between the vital energy of a majority of the organs, which cling with strong tenacity to life, and the fierce disease or premature decay of some other, which drags them reluctant and resisting down to the grave. Thus are the value and productive force of the healthful organs annihilated and lost. A business partnership or corporation may be dissolved, and each of its constituent members may enter some other sphere of industry to provide support for a dependent family, or to add something to the common weal. But, in this partnership of the vital powers, the withdrawing of any one partner causes not only a dissolution of the firm, but the death of all the other members. There is no survivorship. If one perishes, all perish. How often do we see this exemplified, when, from the decay of some one only of the vital powers, a clergyman, who is a minister of religious consolation and hope to his people, is removed in the prime of his life and in the midst of his use-

fulness ; or a mother, on whose counsel and guidance a family of children are leaning for support, sinks to an untimely grave ; or a statesman, upon whose life the welfare of millions seemed to hang, is hurried prematurely to the tomb ! In such cases we ungratefully and impiously attribute the event to the interference of our heavenly Father, when we might as well embark all our treasures, our friends, and our family, on board a ship which had some one fatal defect, and because she foundered in the first gale, or was dashed to pieces on the nearest rocks, throw the responsibility upon Heaven for not having suspended the laws of Nature to save us from the consequences of our own folly. Why did our Creator give us these faculties of inquiry, of forethought, of prevention, if we are not to use them ? And what the necessity of our using them, if he were always to stand by, and rescue us from the effects of our premeditated fool-hardiness ? The possession of the power is accompanied by the obligation to use it ; that is, to learn and to obey the wise and beneficent laws of the Creator. His language in regard to the physical law seems to be the same as in regard to the moral, — that it is easier for heaven and earth to pass than for one tittle of the law to fail.

The first developed power of the infant is that of taking the food, which is to be metamorphosed into the tissues of its body, to be turned, by the transforming power of the organs, from dead substance into living and sentient material. The main preparation of food for the purpose of nutrition is effected in the stomach. The stomach is an organ of curious construction, and it is endowed with astonishing properties. Its appearance is simply that of an oval or oblong sac, or bag, suspended across the body from left to right, just below the diaphragm, and a little below midway of the trunk, — the largest end being situated on the left side of the body. It is separated from the heart and lungs only by the diaphragm. On the upper side of the stomach, and towards the left, there is an opening, where the food which we swallow is received ; and at its other extremity, on the right, another opening, through

which the food, when properly digested, passes out. If the stomach had no property beyond that of a common bag or vessel made of cloth or skin, it is obvious that it would hold, in a quiescent state, whatever was poured into it, except so far as motion might be communicated to its contents from without. But it is indispensable, for the purposes of digestion, that the food taken into the stomach should be kept in constant motion; otherwise the solid and heaviest particles would sink to the bottom, the lightest would float upon the top, and their specific gravities would be their law of arrangement. But, without continual agitation, the simplest food could no more be turned into *chyme* (which is its condition when it passes out of that organ) than cream could be turned into butter without that agitation which we call churning. And could the food be ever so well digested, yet, without this motion, how could it be thrown out afterwards? The stomach is therefore endued with the power of spontaneous or involuntary motion. Food is the natural excitant of this motion. Hence, in every healthy stomach, as soon as food enters it, motion is commenced, and is continued until digestion is completed, and its contents, in the form of *chyme*, are discharged. To effect this motion, the stomach possesses *two* distinct sets of muscular coats, each coat consisting of fibres which pass around, respectively, in opposite directions. Suppose an egg, instead of a hard shell, to have a soft skin, and suppose this skin to consist of two sets of muscular fibres, one of which should run around it from the large end to the small one, while the other set should run round in the opposite direction, that is, in the line of the shortest circumference. If the longer fibres of this covering should contract (and it has been before mentioned that the power of contraction, or shortening themselves, is the property of all muscles), it is obvious that the egg would be made more nearly round, and its contents compressed from the ends towards the middle. If, then, these longer fibres should relax, and the shorter ones contract, the egg would be elongated; the contents being pressed outwards towards the ends. Now



these sets of fibres might be so alternately contracted and relaxed as to drive the contents of the egg round and round, from side to side, and from end to end. And such is the structure and action of the stomach.

These motions of the stomach are primarily necessary for the purpose of mingling with the food a certain ingredient which is indispensable to digestion. This ingredient is a fluid, and is called the *gastric juice*. It is effused or exuded from the mucous membrane or inner coat of the stomach. For the process of digestion there is no substitute for this fluid, nor has any thing like it ever been prepared by the art of man. Boiling in water, for any length of time, will not digest food. Roasting, baking, the action of fire in any form, or of steam, or of any chemical solvents, will not accomplish the object. So far as we know, there is but one agent in the world which has this power, and but one place where that agent is found. That agent is the gastric juice, and the stomach the place of its preparation.

As soon as a mouthful of solid food is received into this organ, its flexible sides immediately contract upon it; and, if not interfered with by having another mouthful forced in too soon, they clasp it, and hold it for the space of a minute. By this clasping movement, the gastric juice is shed out or expressed, and then, by the motion of the food round and round, the juice is intimately mingled with its whole mass. Important practical rules will, by and by, be deduced from these arrangements of Nature.

The natural food of the infant being milk, and this being a fluid, it is obvious that the above-described motions of the muscular coats can propel it round and round until each drop of it is brought into contact with the gastric juice, by whose agency and mixture it is coagulated. This is the first step in the process of its digestion. Yet so ignorant of this fact are many mothers, that, when an infant throws up a little curd from the stomach, they take it as a sign of sickness, and hastily administer an emetic.

But what shall be done when the child begins to require more solid food, — bread, meat, fruit, vegetables? The coats of the stomach, which are softer and more flexible than wash-leather, remain as before. The inner surfaces of this organ do not now become harder to correspond with the more solid food received. They are not converted into a triturating apparatus, like the gizzard of a fowl, for the purpose of breaking down and grinding the solid food which the system is now prepared to assimilate. Nor is this organ suddenly provided with any cracking machine, like that of a lobster, by which hard bodies — shells or bones — can be pulverized and adapted to the wants of the system. What corresponding provision, then, has Nature made to meet the new wants of its child?

Simultaneously with the period when the body requires more concentrated aliment, and the stomach is prepared to receive substances of a firmer texture, the teeth appear. Whoever knows the structure of the stomach, and therefore its inability for effecting the minute mechanical division of any hard, tenacious, or cohesive material, can have no doubt as to the necessity and proper function of the teeth. And here is the first great sin against the laws of health, committed, with few exceptions, by all the people of this country. We eat, not merely with indecent, but with unhealthful haste. As a nation, we have a profusion and an attractiveness of food such as no other people upon the earth enjoys. We consume quantities which would astonish the inhabitants of other countries; and these quantities are often swallowed *en masse*, almost as a wild animal gorges its prey, and, of course, without that mastication which is indispensable to health. In eating, we dispense with the use of the teeth, as though our stomachs were provided with some machinery — a grater, a pestle and mortar, or an upper and nether millstone — to do the work of comminution. But, such not being the case, it follows, that, if we would enjoy health, our food must be finely ground before it is swallowed; for nothing is more certain than that food which is insufficiently masticated will be imperfectly digested; that what is imper-

fectly digested tends to produce disorder through the whole alimentary canal, and cannot make good blood ; and, without good blood, we cannot have good health, good spirits, or the full use of any of our faculties either bodily or mental.

Another reason for retaining the food in the mouth for a long time is, that there are certain glands, opening into the mouth about the cheeks and jaw-bones, which throw a great quantity of saliva into this cavity during the process of mastication. Food saturated with this saliva before entering the stomach is much more easily digested. The saliva, too, has a strong affinity for air ; and in this way the oxygen of that element is carried into the stomach, and there, by its combining with other elements, caloric is given off, which helps to raise the stomach to a higher temperature, and thus aids the process of digestion.

That food may be taken slowly, it ought to be taken in company, and with agreeable conversation. Mental pleasures should save our meals from the grossness of mere animal enjoyment. Cheerfulness should always preside at the table. Food fails of half its nourishing qualities when eaten in solitude, in sullenness, or with any painful or dissocial feelings. No family will enjoy a full measure of health, any more than of domestic tranquillity, who are habitually selfish, morose, or unkind at their meals. Care and anxiety of mind should never be guests at the family board. The very secretions of the body are vitiated by anger, solicitude, or any of the painful emotions. The fruits of the labor of man never nourish us so much as when they are taken with good will towards all mankind ; and it is one of the *physical* conditions of deriving the greatest benefit from the bounties of Heaven, that they shall be received with gratitude to their Author.

Another strong argument in favor of taking our food slowly is founded on our knowledge of the capacity of the stomach. Man is sometimes defined to be an *omnivorous* animal ; which seems to be understood by many people to mean, not that he is capable of eating some of all kinds of food, but that he is

able to eat all of each kind. Instead of supposing that the stomach does not occupy more than one-twelfth of the cavities of the trunk, they seem to reverse this proportion, and to graduate their indulgence of appetite accordingly. An ordinary-sized stomach of an adult is generally said to be capable of holding about three pints; and some physiologists are of the opinion that the quantity of gastric juice poured into this organ at a hearty meal is one pint. Supposing, however, that only two-thirds or one-half of this quantity of gastric juice is poured into that organ at a meal: if ~~we~~ eat slowly, the stomach is filled with the food and with the gastric juice at the same time; and, when the natural limit of its distention is reached, appetite vanishes, and a feeling of satisfaction ensues. But if we eat rapidly or gormandize, the stomach is filled with food alone, and the gastric solvent must be afterwards injected; that is, when this organ is already brimmed, its muscular coats must be strained or distended for the reception of more. As digestion cannot begin until this juice is intimately mingled with the food, the stomach labors to discharge a sufficient quantity of it, and also to make room to receive it. Though full, it must force in more as the means of preparing its contents for egress. It is obvious that such a strain upon its muscular fibres must weaken them. They become like a bow which has been bent so far as to lose its elasticity. A few repetitions of such abuse will impair the tension of the muscles for years, perhaps for life. Instances occur where, through a beastly indulgence of appetite, the muscular coats of this organ are so strained that they lose their contractile power, and remain, like a man beneath a load which he cannot lift. In such cases, the stomach becomes a motionless, that is, a lifeless organ; the food remains a foreign substance, and death speedily ensues.

Another fact deserves remark under this head. The watery parts of our beverage, or liquid food, are not digested, but absorbed. In eating slowly, time is given for this process of removal; but, in eating rapidly, the organ is encumbered, at once and without relief, by the accumulated bulk and weight of all we swallow.

And again : however solid the food we take, whether meat, unsodden vegetables, or the fruit of nuts, — hardly less solid and indigestible than the shell that encloses them, — it must all be reduced to a pulp, to a soft, semi-fluid substance, before it is prepared to pass out of the stomach, to be carried into the circulation, and be deposited, in infinitely minute particles, over the system, as a part of the living organization. Now, as every one knows, all solid masses, when saturated with or steeped in water until they become soft, are greatly enlarged in bulk. If, then, the stomach is filled with solids, how much must it be overstrained when the volume of these solids is enlarged by their being reduced to a fluid ! The farmer is familiar with cases of this kind ; for it is the cause of death to neat cattle or horses who gorge themselves with dry grain, and then have access to water.

I will add but one more reason why all our food should be masticated until it is ground to a powder, and, being mixed with saliva, become almost a fluid, before it is thrown into the stomach. The gastric juice cannot penetrate at once to the interior of solid lumps, or hard knots of food, — of compact muscle, or of tendinous or ligamentous substances. In such cases, it must commence the dissolving process on their outside ; and only when the outer layer is dissolved and removed can it begin to operate upon the next layer, and so on, until the whole process of solution is effected. This occupies much time ; and, while the gastric juice is at work on the exterior of the mass, a most unhealthful fermentation, or chemical change, caused by heat and moisture, is going on in its interior.

Yet notwithstanding all this accumulation of mischiefs, so obvious as soon as stated, how common it is for most parents to hurry children at their meals, even beyond the rate prompted by the keenness of young appetites ! Not only example but commands are added to the impulses of hunger ; and thus a habit of gorging food, as unseemly as it is unhealthful, is formed, which lasts them through the shortened life it allows. Derangement, weakness, inflammation of all the digestive or-

gans throughout their whole extent, dyspepsia, that prolific mother of diseases, follow in the train of this unbecoming and unnatural practice. The food being the material from which all the tissues of the body are formed, — the crystalline humors of the eye, the exquisitely-delicate substance of the brain and nerves, the finely-wrought muscles, — unless this food is well prepared before it enters the circulation to be distributed over the frame, it is in vain to expect organs which are sound to the core ; it is in vain to expect muscles, compacted to the power of greatest endurance, or acuteness of the senses, or nerves quick answering to the commands of the will. A spinner, from wool half combed, half carded, and full of knots and tangles, may as well expect to draw out an even and beautiful thread ; a weaver, from a thread, here sleazy, and there twisted to a wire, now coarse as cord, and now attenuated to a spider's line, may as well expect to form the elegant product of the loom ; and a manufacturer, through all the stages of whose work the unskilfulness of each preceding process has redoubled the difficulties and imperfections of all succeeding ones, may as well expect to command the highest prices in the market, or to win the highest premiums at the fair, as any one, subjected to the universal law of mortality, who thus violates the very preliminaries and antecedents of health, can expect to attain to that vigor and robustness of limb and frame, or to reach the full term of life, or to enjoy the mental capacities, for which a bounteous Providence had originally endowed him.

Yet how many of our social regulations pertaining to diet are a systematic infraction of these laws of Nature ! Some of them could not have contravened those laws more had such been the express purpose of their adoption. The arrangements of many families, the short intermissions of our schools, and, in some instances, of our churches and other public assemblies, the haste of travellers, the brief time occupied in eating in boarding-houses for work-people, whether mechanics in shops, or laborers on public works, or operatives in factories ;

all these practices tend powerfully to depress the standard of health amongst us, and to expose us on all sides to the invasion of disease. In all these and in other particulars, the customs of our people have been adopted in ignorance of the laws of physiology, and they never will be reformed until that ignorance is dispelled. Passengers in railroad-cars and on board steamboats seem to eat with a rapidity suggested by their new powers of locomotion, as though the processes of Nature could be expedited by their impatience of delay. Students in academies and colleges, when eating at a common table, are no exceptions to this general statement; and though an hour of mental relaxation and of social excitement — *of hilarity, genial yet gentlemanly* — is needed in an especial manner by students at their meals, yet, in many of our literary institutions, they are subjected to the Auburn and Sing-Sing discipline of eating in perfect silence.

Another wide departure from Nature's "Health Regulations," in regard to diet, consists in eating at unseasonable times. Different nations, ancient and modern, as well as different classes in the same nation, vary greatly from each other in respect both to the hours of meals and the frequency of their succession; and much has been said of the relative propriety of their customs. But a universal rule, as it regards the individual, is, never to eat, either while the previous meal is still undergoing the process of digestion, or immediately after that process is completed. After food is received into the stomach, it is warmed if too cold, it is cooled if too warm, until it acquires the temperature of about 100°. If too dry, the stomach demands moisture; if too watery, the water is drained off until it is prepared to be mingled with the gastric juice. In a healthy adult, the process of digesting a hearty meal occupies from three to five or six hours, according to the more or less digestible quality of the food. Now, when the follicles of the stomach have given out what gastric juice they contain, when the work of digestion has so far advanced that the qualities of the food are chemically changed from what they were when received,

what can be more unnatural or absurd than to introduce a new mass of raw material, which requires a new exuding of, and saturation by, the gastric juice, already exhausted, and which must be mingled by the action of the stomach with the food of the preceding meal, now half prepared or nearly prepared to leave the organ? If in any culinary preparation an equal quantity of new raw material were introduced just as the process of cooking the original should be completed, it would hardly make the compound more unsavory to the palate than this practice makes the chyme unhealthful to the body. Yet how often is this done, either through ignorance, or to gratify appetite, or to subserve some temporary convenience about meals, or, what is worse than all, for the monstrous purpose of eating a meal or two *in advance*! To wrap ourselves in furs and flannels during the heats of summer, as a preparation for winter's cold, would not be a greater outrage against Nature than to eat in advance of hunger. A rule, never violated without incurring serious penalties, either immediate or remote, is, not to eat a second time until the previous contents of the stomach have been digested and are passed away, and that organ has had a season of repose. Alternate action and rest is the universal law of every power and faculty, both of body and mind. So, too, after taking even a moderate meal, all severe exertion, whether mental or physical, should, for a brief season, be remitted. Especially is this important in regard to students and others who lead sedentary lives.

Following the course of Nature, I should be next led to trace the steps by which the digested food is carried to the blood, to be distributed through the circulation for the growth and nourishment of every part of the body. But my present object being only to show the practical and every-day value of physiological knowledge, I pass by, with a single remark, those wonderful processes which Nature performs in the secret laboratory of the system. Whoever feels delight in tracing effects to causes, or loves to contemplate the wisdom and beneficence of the Creator, will find, in this department of his works, an



inexhaustible source of intellectual gratification ; and, at every step of his progress, exclamations of thankfulness and adoration will burst spontaneously from his lips. But it must suffice to observe, that after the aliment, in a fit state for nutrition, has been passed from the stomach, and has received the appropriate secretions from the liver and pancreas, it is then taken up, or drawn out from the great alimentary canal, through tubes or ducts which are microscopically fine and inconceivably numerous. These tubes or ducts (technically called lacteals, from the Latin word *lac*, signifying milk, because the substance which they take up very nearly resembles milk in its color and consistence), after traversing winding passages, and passing through various ganglia, are at length all gathered into one tube or channel called the thoracic duct, which ascends behind the heart in a direction towards the left shoulder, and empties its precious contents into the left subclavian vein, just before that vein pours the returning blood of the whole system into the heart.

Over our nourishment, after it passes from the stomach, until its stream is mingled with the blood, and reaches the heart, we have no control, except through medicinal agents. On leaving the stomach, it descends, as it were, into subterranean channels, beyond our reach or direction ; and, in the invisible recesses of the body, it passes through organs whose uses are not known, and is subjected to chemical changes which the art of the physiologist has not yet detected ; but, on reaching the heart, that vital stream may be said to re-appear upon the surface, because in that organ it is directly subject to mechanical action from without.

The human heart is sometimes said to be a double organ ; but by this it is only meant that its right and left sides perform different operations, the right side of the heart propelling the blood into the lungs, and the left side propelling it over the rest of the body. These sides of the heart, though similar in their general structure and uses, and constituting the same general organ, are yet, *as to the course of the blood*, distant from

each other the entire length of their respective circulations; that is, the blood in the right side of the heart cannot reach its left side (although separated only by a thin partition) without going through the lungs, and the blood in the left side cannot reach the right side without going round the whole system, except through the lungs.

But when the blood, now enriched with nourishment from the food, enters the lungs, it is emphatically ours. Here, in a large sense, our strength, our health, our life, are placed in our own keeping. Here is an organ by whose proper use a vast portion of all the diseases which afflict humanity may be prevented. Here is a point, too, where many diseases may be met and cured. Here we are invested with almost unlimited power over health and life, and attached to this power is a corresponding responsibility.

That our blood is our *life* is not only the declaration of Scripture, but the common conviction of mankind. But no part of our animal organism, no part of animated nature with which we are acquainted, is so short-lived as the blood. The insects which live but for a season, the tribes of ephemera which die on the day of their birth, are common emblems of the brevity of life; but the shortest of their terms of existence is longevity, compared with the vital principle of the blood. Water, milk, the expressed juices of vegetables, unfermented liquors, will ordinarily remain for hours unchanged; but the blood will perish irrecoverably in a few minutes, if not renovated by a foreign power. It is probably the most perishable of all organized living substances. Yet this blood has inexhaustible resources of life in pure air. On this element it constantly relies. Without air, the life of the blood expires, like the flame of a candle beneath an extinguisher; but give it air, and its vital power will subsist for days and sometimes for weeks, even though no food or drink is taken into the system. Let the lacteals pour into the blood the results of their most perfect elaboration, and, without air, it dies forthwith, and the process of corruption or putrefaction commences. Food is an

occasional want, air a perpetual one. So indispensable, so continual, so instant at all times, is the necessity of pure air to vitalize the blood and sustain the life of man !

In the course of its circulation, the blood comes to the lungs in search of life, that is, of pure air. From the trunk, from the brain, from all the extremities, it is hastened onward to the lungs, just as a diver ascends to the surface of the water in quest of breath. As the blood is driven into the lungs by the strong propulsion of the heart, so the air is forced downwards into the same organs by a pressure equal to a weight of fourteen pounds on the surface of each square inch. The lungs are the common ground where these two great life-sustaining agents meet ; and here they are sure to meet, unless forcibly kept from each other by the most egregious folly and wickedness of man. If air is admitted into the lungs to greet the blood on its arrival there, and to impart its vital properties to that fluid, then the blood flows back rejoicingly to every part of the body, carrying health, spirits, strength, activity, endurance, and bountifully dispensing a gladsome sense of existence wherever it goes. But if, on the other hand, the air is debarred from admission into the lungs, or if only impure air is admitted, then the blood flows back in its course, languid, infectious, inflicting torpor upon every sense, and disease upon every organ. Hence it is not too much to say, that the relation of the blood and the air to each other, and the mechanism of the lungs where these wonder-working agencies meet to reciprocate benefits, constitute one of the most valuable as well as most interesting departments of worldly knowledge.

The air, as it is seen and felt and breathed, appears to be a simple, uncompound body ; but, in reality, it is composed of three ingredients, as different from each other as light from darkness, or fire from ice : and a chemist will separate these three elements from each other as readily as an expert seamstress will untwist a cord composed of three different-colored threads. These three ingredients are oxygen, nitrogen or azote, and carbonic-acid gas. The oxygen constitutes *twenty-*

*one* parts in a hundred of the whole bulk. Dr. Combe says, that about *seventy-eight* parts in a hundred are nitrogen; and the residue only, or one per cent, is carbonic-acid gas. Some physiologists differ a little from this authority in regard to the proportion of carbonic acid in the air. But this is not material. Dr. Combe further says, that, at every breath, "*eight or eight and a half* per cent of the oxygen or vital air has disappeared, and been replaced by an equal amount of carbonic acid." This being the case, it follows that breathing the *same* air only three or four times successively would exhaust it of all its oxygen, and leave carbonic acid in its place.

The oxygen of the air is the supporter of human life. Every thing else may be as it should be, — perfectness of organization, soundness in every part, nourishment, temperature, — but take away oxygen, and almost instantaneously the strongest man is a corpse. This ingredient, which is the supporter of life, is identically the same with that which supports combustion. Wherever the flame of a candle will of itself go out, a man will die. Keeping this universal truth in view, that it is the same principle which supports human life and which supports combustion, and every individual will have a thousand illustrations at hand to show the relation in which he stands to this vital element of the air. Few persons are unacquainted with the experiment of letting down a candle into a stagnant well, vault, or pit of any kind; and it is understood, that if, in such places, a candle will not burn, a man will not live. Carbonic acid being much heavier than an equal bulk of oxygen or nitrogen, it settles in the lowest places. It therefore fills up any depressions or excavations which remain for a long time unoccupied or unopened. It becomes the sediment of the atmosphere as mud is the sediment of water. When a stream flows rapidly, the earthy particles or impurities which it may contain are mingled with the whole mass of the water; but, if the stream expands into a quiet lake, the earthy materials subside to the bottom. So in regard to the air: whenever it is in motion, the carbonic acid is held in mechanical solution with its

whole body ; but this ingredient will rest at the bottom of unoccupied vaults, wells, &c., until it is expelled from them by some mechanical force, or neutralized by some chemical agency. If ever there were any one who had so little philosophy in his composition as to apply an extinguisher to a candle without thinking why he succeeds in putting out its flame, he has only to learn that it is because the extinguisher cuts off the stream of air that sustained the blaze. Our lungs are in precisely the same condition : if isolated from the air, we perish by suffocation ; but, organically speaking, it is not, as most people suppose, because life departs, but because *it ceases to come*. If Othello "put out the light" of the candle by an extinguisher before smothering Desdemona in her bed, he only repeated in the second operation, so far as the natural laws are concerned, what he had done in the first. We kindle our fires by repeated blasts from the mouth or from a hand-bellows ; we apply a sheet-iron blower to a grate ; all our stoves and furnaces are so constructed that we can graduate the current of admitted air ; and we should at once discard the workman as a bungler, who should fail in any of the contrivances for that purpose. The smith and the forger increase the intensity of heat for their respective operations by the use of a stationary bellows worked by the arm or by steam ; the engineers of the steamship and locomotive admit a quantity of air into the fire-chamber exactly proportioned to the amount of work to be done ; and in all these cases we say, colloquially, that we increase the draught of air ; but it is an increase of the quantity of oxygen only which produces these results. Let the draught which is applied consist of nitrogen, or of carbonic acid, and the fire, instead of being roused, will be extinguished in an instant. Even gunpowder will not burn without oxygen. It is not the seventy-nine hundredths, therefore, of nitrogen and of carbonic acid, but the twenty-one hundredths of oxygen, to which we are alike indebted for the mechanical power of steam, for the brilliant flame of lamps, the genial heat of fires, and for our own physical existence from minute to minute. And yet, with all these

proofs and examples continually before our eyes, we fly, as a people, from the invigorating influence and exhilarations of the open sky ; there is a more and more eager quest for indoor and enervating employments ; we strive to circumvent Nature by occupying winter apartments whose doors and windows are almost hermetically sealed ; we sleep in narrow and close rooms ; we send our children to inhale disease in unventilated schoolhouses ; we attend the lecture-room or other large assembly, where there are no provisions for a change of air ; and many mechanics and operatives, although they know, from constant experience, that their own machinery will cease to move if fresh air is not supplied to the engine, still breathe an atmosphere themselves which would hardly keep their own fires alive. Amid an almost universal want of knowledge respecting the physical laws, each man's ignorance is kept in countenance by that of his fellows.

It was remarked above, that, keeping the fact in view that the oxygen of the air is alike the supporter of life and of combustion, every man could find numberless illustrations, in his daily experience, of his constant dependence upon this element for the continuance of life. The application of this truth is still more direct and significant when we consider that it is no other than this very process of combustion itself by which the degree of warmth necessary to our existence is kept up in our bodies. In healthy lungs and blood-vessels, no less than in the fireplaces and furnaces of our dwellings, or in smitheries, forges, and locomotives, is there a constant combustion going on while life lasts. Strange as it may seem, yet it is still true, that every living man is on fire, though in some, as we might naturally infer from their torpidity and sluggishness, there are only a few smouldering and decaying embers, enveloped in their own soot and cinders, and on the verge of extinction. The standing temperature of our bodies, at all seasons of the year, is 98°. If our temperature falls below that, and so continues, the machinery will no longer play, and life ceases. The mean temperature of our atmosphere, for the whole year, is

about  $47^{\circ}$ . Sometimes, however, it falls to a dozen or more degrees below zero, making, in such cases, a difference of one hundred and ten or more degrees between our own temperature and that of the air by which we are surrounded. Our persons are just like any other substance enveloped in a medium colder than itself. It is a universal law that there is a constant tendency to equilibrium among bodies of different temperatures, and, of course, a constant loss of heat on the part of the warmer body. Whenever, therefore, the temperature of the atmosphere is below  $98^{\circ}$  (and, in our climate, it is always so, except during a very few hours of a very few days in the year), heat is constantly radiating from our bodies into the surrounding air. With the thermometer below zero, and with lungs and blood as much exposed to the open air as in a living subject, a man of ordinary size, if instantly struck dead, would probably lose every particle of his warmth in half an hour. And yet, with sufficient food, and a proper quantity of exercise, many men — travellers, shipwrecked sailors, and others — have been known to sustain the system at the life-point of  $98^{\circ}$  for hours and even days together, without any aid from artificial fires. This striking result is effected by the generation of heat — that is, literally by fires — within themselves. Material capable of being burned — in this connection, it would be strictly correct to call it *fuel* — is derived from our food, and from the tissues of the body previously formed from the food. This fuel is carried into the blood. In the lungs, the oxygen of the air is also absorbed into the blood; and here, therefore, the combustible material and the supporter of combustion meet. Fire is kindled, by means of which the temperature of our bodies is raised to  $98^{\circ}$ . And not only so, but a quantity of surplus heat is generated sufficient to repair the immense loss occasioned by our being immersed in an atmosphere so much colder than ourselves, and which is constantly stealing from us so much of our warmth.

This combustible material is called *carbon*. Chemically, it is the same material with the combustible part of our wood,

coal, peat, or other fuel. The blood of every person in health is richly freighted with it. A part of this carbon is obtained directly from our food; a portion of it is obtained from the waste or used-up particles of the body. In a healthy subject, every organ is undergoing a rapid process of waste and renovation. All muscular efforts, all nervous activity, cause a loss of the very substance of the muscles and nerves themselves; but new particles, fresh, young, and vigorous, take the place of the old ones. The old, however, though detached and cast off from the living tissues, are not worthless. They are thrown into the current of the blood; and as they consist, to a considerable extent, of carbon, they are burned. This is the same economy which a man practises when he repairs or pulls down his old house; he uses the waste materials of the old dwelling to keep up a fire to warm himself in the new one.

If any one doubts that an active fire is sustained in the interior of the body, let him explain how it is that the lungs of a person in health *are never cold*. Such a person may remain for hours in an atmosphere below zero: he breathes eighteen or twenty times a minute, and, therefore, eighteen or twenty times a minute he admits a blast of this ice-like atmosphere into the whole substance of the lungs. Frost may fringe his eyes; icicles depend from his mouth; his ears, cheeks, and nose may be frozen: and yet his lungs will experience no sensation of coldness. Suppose the interior of our hands, our arms, or our feet, were, like the lungs, permeated by tubes, or hollowed out like honeycomb, and that an atmosphere below the point of congelation were constantly rushing into these tubes, or cells, abstracting their heat and imparting its own cold,—how long before they would be frost-bitten? Nothing but the genial warmth generated in the lungs by the carbon of the body and the oxygen of the air saves them, during any cold winter's day, from such a fatal catastrophe.

In bulk, the principal ingredient of the air is nitrogen. It constitutes more than seven-tenths of the whole mass of the air. This ingredient, so far as the lungs are concerned, seems



to have no active properties. It is a mere diluent. If oxygen composed the whole body of the air, almost every thing, except ice and granite, would be consumed in it. A common candle would be burnt out in a few minutes. Should fire ever escape from our control, it would end in a universal conflagration. By the stimulus of pure undiluted oxygen, received into the lungs, all vital movements would be so accelerated, that life would be consummated in a few days. But nitrogen reduces the stimulus of the air to that precise degree which conduces at once to the greatest activity and the longest duration of existence.

Carbonic acid constitutes but a very little of the whole bulk of the air, being estimated by some chemists at one per cent, though by others at somewhat more. Its properties are strikingly distinct from those of either of the ingredients with which it is combined. Oxygen, as has been said, is the supporter of life; nitrogen is neutral; but carbonic acid is a deadly poison. Constituting, however, so small a portion as it does, and being equally diffused through the whole mass of what we call pure air, it works no mischief. It is only when breathed by itself, or when it is a large proportional of what we breathe, that its destructive properties are manifested. When breathed alone, death immediately ensues.

Whenever combustion takes place, this carbonic acid, this deadly poison, is generated rapidly and in great quantities. When oxygen and carbon combine in the body, they evolve heat, *and carbonic acid also*. It is the same operation precisely which is carried on when a brazier or pan of charcoal is burned in our rooms. The oxygen of the air in the room combines with the carbon in the coal, and gives out heat and carbonic acid. So in the body, the oxygen of the air received into the blood through the lungs combines with the carbon already in the blood, and gives out both the heat and the gas. If, then, there were not some mode of expelling this gas as fast as it is formed, we should soon be killed by a poison of our own creating. It has been said that the blood goes to the

lungs in quest of oxygen. That, however, is not its only errand. It goes there, also, to discharge the carbonic acid which has been generated by the combustion that has taken place during the circulation of the blood around the body. The lungs, therefore, are a contrivance not only to introduce oxygen into the blood, but to take carbonic acid out of it. We know that if we burn coal in a close room, and breathe the gas which it exhales, it will produce suffocation and death. So if the lungs were closed, that is, if we should cease to throw off the carbonic acid produced by the burning of carbon in the blood, it would equally cause suffocation and death. Hence a chimney for its egress, and a current of inflowing air, are necessary to carry off this deadly ingredient from our rooms; and many persons are aware of this fact, who seem to be either ignorant or heedless that a similar current of pure air is equally necessary to remove this fatal poison from their lungs.

From the above, it will be perceived that every breathing thing is a laboratory where the work of destroying the vital property of the air, and of producing poison in its stead, is constantly going on. And although the quantity of the air is exceedingly great, — being said to cover the whole globe to the height of fifty miles, and doubtless existing, though in an extremely rarefied state, to the height of a hundred miles or more, — yet, in process of time, with all the myriads of lungs which belong to all the orders of animated nature unceasingly at work, why should not its whole mass be gradually changed from wholesomeness to poison, from life to death? At any rate, as carbonic acid is much heavier than oxygen or nitrogen, why should it not accumulate upon the surface of the earth, filling all its valleys, overflowing its plains, and rising, like a deluge, along its hill-sides, until, at length, the last island peak of the highest mountain should be submerged, and universal silence and death reign over animated nature, — self-destroyed by converting into poison the very element which had been given for its existence.

But in this case, as in all others, where a presumptuous

philosophy has conjectured that Divine Providence was at fault in any of its arrangements, that philosophy has only to push its researches farther, to turn the very difficulties which it encountered into new evidences of adorable wisdom. In the economy of Nature, ample provision is made for the reconversion of the carbonic acid into carbon and oxygen. This process may take place spontaneously in order to restore the equilibrium between them ; and, during the operation, as much heat may be absorbed, and pass into a latent state, as had been given out in the formation of the acid. The most obvious and beautiful provision, however, consists in the relation which the animal and vegetable worlds hold to each other. Animal and vegetable nature constitute a whole. Each is the supplement of the other. Oxygen is the life of the animal kingdom ; carbonic acid is the nutriment of the vegetable. All breathing existences consume the oxygen, and produce the acid, while vegetable existences consume the acid, and produce the oxygen. The countless myriads of lungs, in their ceaseless heavings, are constantly absorbing the latter from the air, and ejecting a stream of the former, compared with which the volume of the Mississippi or the Amazon would be but a rill. But, on the other hand, the tenfold myriads of the blades of grass and the leaves which make verdant the forest and the field absorb our poison as their nourishment ; and, in its stead, they elaborate and pour forth a flood of oxygen for the sustentation of the animated world. Thus decomposition and recomposition are equal. The ebb and flow of the mighty tide of conscious and unconscious life are mutually sustained. As water is evaporated from the surface of the ocean and the land into the sky, to be thence precipitated in fertilizing showers, and, after gladdening the earth and replenishing the sea, is again carried upwards on its perpetual circuit of beneficence ; so the animal and vegetable worlds prepare, each for the other, these elements of their respective existences, and pass them backward and forward, as from hand to hand, in continual exchange ; the ever-restless winds being the unchartered medium of the beneficent commerce.

For maintaining the wonderful relationship which exists between the corruptible blood within us and the life-preserving air without, the lungs are the appropriate and principal organ. Doubtless, the air is brought into contact with the blood through the skin, especially when that important and *vital* organ is kept clean; but this can be effected only to a very limited extent. The common mart, where the air goes to exchange its oxygen for carbonic acid, and where the blood goes to exchange its carbonic acid for oxygen, is the lungs.

To an ignorant observer, the lungs are a large, unshapely, unattractive mass, of a reddish hue, having neither beauty of form, structure, or coloring. But the philosophic observer cannot look upon them for a moment, and consider their curious internal construction and their important functions, without an overflow of that intellectual delight which springs from seeing an adaptation of the simplest means to accomplish ends of extraordinary niceness and difficulty.

The lungs are very large, occupying the whole internal cavity of the chest (with the exception of the heart, which is, ordinarily, only about the size of the owner's clinched hand), and therefore filling almost all the space between the breast-bone and the shoulder-blades, and between the bottom of the neck and the diaphragm, or middle line of the trunk. It is, therefore, obvious that, in a full-sized man, they are of sufficient capacity to hold many quarts of air and blood. Their internal structure is spongy and porous in the highest degree. This sponginess of structure results from the fact, that, throughout their whole substance, they are pervaded by three sets of vessels; the first two being for the blood, the third for the air. The blood is driven from the right side of the heart into the lungs through one channel only,—the pulmonary artery; but, as soon as this artery reaches the lungs, it branches out into a countless number of tubes, which spread and divide until they permeate every part of the whole mass of the organ. Should we imagine a tree with its trunk branching out into limbs, and its limbs branching out into twigs, until the latter became so thick

as almost to exclude the light by their crossings and interlacings, such a tree would be a good representation of the manner in which the pulmonary artery branches out into blood-vessels on reaching the lungs. But, when the blood reaches the extremities of its thread-like vessels, it does not stop and return back to the heart by the same passages which conveyed it out. It flows onward and *through* the lungs; the second set of vessels being only a continuation of the first. The tubes which carried the blood outwards, after reaching their extreme point, bend and turn backwards towards the heart; and as in going out they had become more and more numerous by division, so, on their return, they become fewer and fewer by union with each other, until, at last, they are all gathered into one channel, — the pulmonary vein, — and returned to the left side of the heart. As in the one case they were divided from a trunk into branches, and from branches into twigs; so, in the other, they are united from twigs into branches, and from branches into a trunk. It is like one great thoroughfare leading into a city, which, on reaching its confines, begins to divide and diverge into numberless streets, lanes, and alleys; and these, after traversing every part of the place, converge towards a common outlet, which leads from the city on the opposite side by another great thoroughfare. Such are the two sets of blood-vessels, — arterial and venous, — which occupy the body of the lungs; and from whose number and closeness to each other, one might suppose that no room would be left for any thing else. But the spaces for the reception of the air are almost as numerous as those for the reception of the blood.

The air finds access to the lungs through the mouth and nostrils. It descends through the windpipe, which, at the bottom of the neck, divides into two branches, one going to the right, the other to the left lung. As soon as these two air-passages reach the body of the lungs, they branch out in the same manner that the blood-vessels do; so that, throughout the whole substance of these organs, an air-cell lies side by side with a

blood-vessel. The sides or walls which separate the air-cells from the blood-vessels are exceedingly thin, filmy, and gauze-like. They are so strong as to keep the air and the blood each in its own passages, and yet of so fine a texture as to allow the carbonic acid of the blood to escape into the air-cells, and the oxygen of the air to be absorbed into the blood-vessels. They allow each one to come to the other, which is life; they prevent each one from extravasating into the other, which is death. The air which we inhale at a single breath, if received into the circulation, would destroy life in a minute. The blood which at any one time occupies the lungs, could it burst its bounds, would also destroy life instantaneously. Yet in this receptacle of the lungs do these two necessary yet opposite elements meet, while life lasts, to reciprocate benefits, — each approaching the very limits of danger, but never transgressing them without some fault or improvidence on our part.

One fact must be noticed in this connection, the importance and bearing of which will be seen hereafter. The air does not, like the blood, flow *through* the lungs. Its egress is by the same passages as its ingress.

It is necessary here to introduce a single paragraph in relation to another vital organ of the body. Although this may seem a digression, yet it will not be found so in the sequel.

The briefest outline of physiological science would be radically defective if it took no notice of the *skin*. Surprising as it may at first seem, this simple envelope of the body is a vital organ; because, if any considerable proportion of it were to be destroyed, death would ensue, as certainly as though we were to remove the brain, or take out the heart. The skin consists of three layers, or coats. The exterior coat is a comparatively rough, hard substance, and is insentient. Its object is the protection of the two interior coats, as the bark or rind of a tree protects those fibres of the wood in which the processes of vegetable life are carried on. The second coat contains that coloring-matter which gives to different races or individuals their peculiar hue or complexion. It is often said that differ-

ences in regard to human rights and privileges are founded upon the skin, but this is not philosophically correct ; for, as far as any such differences are founded on color, — all the coloring-matter residing in one only of the three membranes, — those differences are obviously founded only on a third part of the skin. The interior coat is the living or true skin. It is pervaded by nerves and blood-vessels. In a healthy person, these blood-vessels, although invisible to the eye, are in a state of the greatest activity. The three coats — or the whole membrane — are perforated by an inconceivable number of apertures called pores. Through these pores a great deal of the waste matter of the system is excreted or discharged. While taking vigorous exercise, perspiration flows out from the body through these orifices, and collects in drops. This is called *sensible* perspiration, because its quantity is so great as to be perceptible to the senses. The phenomenon of sensible perspiration is an occasional one, essential to health, but more or less frequent according to the habits of the individual. But there is an *insensible* perspiration, which is habitual. Languor, cold, numbness, seize every part of the body if its insensible perspiration is checked ; and, unless it can be revived, these sensations of coldness and torpor will prove the harbingers of death. The watery particles exuded through the pores are a combination of hydrogen which we take into our stomach with our food, and of oxygen which we inhale through the lungs. But the perspiration is far from being pure, limpid water. It contains salts, fatty or unctuous matter, and other impurities. It collects dust also as its particles fly through the air and come in contact with the skin, or as they are communicated to our persons by our clothes. The heat of the body vaporizes the watery part of the perspiration, and, in so doing, it leaves a sediment at the mouth of every pore, like a sand-bar at the mouth of a river. Unless this sediment is removed by frequent washings and friction of the whole person, it will accumulate, harden, and incrust the entire surface, and form a loathsome and disgusting amalgam of dirt and grease. But when exercise is taken sufficient to throw out the

waste parts of the system through the pores, and then these nauseous obstructions are removed by daily ablution, the currents of life will flow out to the surface, and to all the extremities, full, deep, and majestically strong. The jockey understands this perfectly well in regard to his horses, though so ignorant of it in regard to himself; and a gentleman who rarely washes or brushes his own person would discharge a groom who should neglect to wash and curry his horses. The best antidote and remedy for most cutaneous disorders or eruptions is cleanliness. We are accustomed to call such maladies diseases of the skin; but they are often no more diseases of the skin than a burn is. They are diseases of unclean habits. For their removal or prevention, the practices of the community must be altered; but this will not be done without the diffusion of physiological knowledge.

I hope I have now given such an outline of the principal vital organs and functions as will render the practical remarks which are to follow intelligible and instructive.

It is manifest from what has been said, brief and incomplete as it is, that the health, vigor, and longevity of the human family are almost entirely dependent upon three things:—

✓1. A sufficient quantity of wholesome and nutritious food, well prepared before it is sent into the stomach.

2. The due vitalization of the blood in the lungs.

This vitalization of the blood is effected by our inhaling the necessary amount of pure air, which, as I shall presently show, is utterly impossible without active exercise.

3. Personal cleauliness, by which is meant cleanliness of the whole surface of the body.

And surely it is a truth fitted to awaken our most fervent gratitude to the Author of our existence, that he has placed these three great conditions of our physical well-being under our own control. Of the nature or essence of the vital principle we are as yet ignorant. Some of the internal ganglia also are mysteries to the profoundest science. Of the more subtle



movements in the interior of the system, we can take no available cognizance. These inward vital processes are not subject to our volition. The heart will not continue to beat, nor the blood to flow, at the bidding of the mightiest of the earth. The sculpture-like outline of the body; its gradual and symmetrical expansion from infancy to manhood, every day another and yet the same; the carving and grooving of all the bones and joints; the weaving of the muscles into a compact and elastic fabric, and their self-lubricating power, by which, though pressed together in the closest order and crossing each other in all directions, they yet play their respective parts without perceptible friction; the winding-up of the heart, so that it will vibrate the seconds of threescore years and ten without repair or alteration; the channelling-out of the blood-vessels, more numerous than all the rivers of a continent, and so thoroughly permeating every part, that there is no desert or waste spot left where their fertilizing currents do not flow; the triple layer of the skin with its infinite reticulations; the culling and exact depositing of the material of that most divinely-wrought organ, the brain, for whose exquisite workmanship it would seem as though air and light and heat and electricity had all been sifted and winnowed, and their finest particles selected for its composition; the diffusion of the nerves over every part of the frame, along whose darksome and attenuated threads the messengers of the mind pass to and fro with the rapidity of lightning; the fashioning of the vocal apparatus, so simple in its mechanism, and yet so varied in its articulation and its musical range and compass; the hollowing-out of the ear, which secures to us all the utilities and blessings of social intercourse; the opening of the eye, on whose narrow retina all the breadth and magnificence of the material universe can be depicted; and, finally, the power of converting the coarse, crude, dead materials of our food into sentient tissues, and miraculously enduing them with the properties of life, — over all these, as well as over various other processes of formation and growth, our will has no direct control. They will not be fashioned, or

cease to be fashioned, at our bidding. It was in this sense that the question was put, "Which of you, by taking thought, can add one cubit unto his stature?" It is not by "taking thought," but by using the prescribed means, — by learning and obeying the physical laws, — that the stature can be made loftier, the muscles more vigorous, the senses quicker, the life longer, and the capacity of usefulness almost indefinitely greater.

It is diet, oxygenation of the blood, and personal purity or cleanliness, which have the prerogative of accomplishing these objects; and these are in our power, within our legitimate jurisdiction: and, if we perform our part of the work faithfully and fully in regard to these things, Nature will perform her part of the work faithfully and fully in regard to those subtler and nicer operations which lie beyond our immediate control.

On the first point, — that of diet, — I have already said as much as the limits of this Report will warrant.

In regard to the second point, — the proper oxygenation of the blood, — a few observations will make it apparent that this vital operation may be defeated in any one of three different ways, or, with more fatal despatch, in all of them acting together.

1. Even when the lungs are sound and of good size, the blood may fail to be vitalized by our breathing impure air, — that is, air of which less than twenty-one hundredth parts are oxygen. As breathing the air once unfits it for being breathed again until it has come in contact with vegetation, or been otherwise renovated in the great laboratory of Nature, it follows that a quantity of new air should be supplied to the lungs just as fast as we exhale the old. This is most perfectly done under the open sky; and hence the universal fact, other things being equal, that those who live most out of doors enjoy the best health. In our apartments and houses, fresh air should be admitted just as fast as the oxygen of the old is destroyed by our own breathing, or by fires and lights; and it should be borne in mind, that, as the same process is going on in us and

in a common fire or flame, a few lights in a room will consume as much oxygen as a man. Now, the mother violates this rule when she sinks her babe in the pillows of a cradle or crib, and, by so covering it up as to impede the access of fresh air to its lungs, may with almost literal truth be said to bury it alive; because, in such case, the infant is compelled to breathe the same air the second time, or, perhaps, many times. Parents violate this rule when, for the sake of guarding against what they call the inclemency of the season, they make their children sleep, or sleep themselves, in a small room, with closed doors, and with windows carefully calked in order to keep out the cold. A child who has been physically well trained will not suffer so much by sleeping with the windows of its apartment open, when the thermometer is at zero, as by habitually lying all night in a close, pent-up apartment. This law is flagrantly violated when children are kept in-doors for days together, although the weather be as cold as our latitude will permit, instead of being sent out daily, and several times a day, to take such vigorous exercise as will keep them warm, in the open air; or, at least, in some place where the sun's light can come.\* This law is most absurdly and cruelly violated by teachers who supply only impure air for their pupils to breathe, at the same time that they require them to study. An engineer might as well require his locomotive to go when he shuts off the draught from the fire-chamber. The Pharaohs who demand intelligent study in the absence of pure air are as tyrannical as the Pharaoh who exacted a full tale of bricks without straw, with the aggravating circumstance against them, that this tyranny is exercised upon children instead of men. A great many of our private dwellings, especially those which are used as boarding-houses, and, almost universally, our public edifices, are constructed in open disregard of the laws of physiology.

The immediate effects of breathing impure air are lassitude

\* The Neapolitans have an excellent proverb, that where the sun does not come the physician must.

of the whole system, incapability of concentrated thought, obtuseness and uncertainty of the senses, followed by torpor, dizziness, faintness, and, if long continued, by death. When great mental efforts are put forth simultaneously with the inhalation of impure air, so much black blood is forced into the brain in order to sustain its energies, that a fit of apoplexy at once closes the scene. Instances of this will occur to every observant mind. That of the late Chief Justice Parker of Massachusetts, of Mr. Emmet of New York, and Mr. Pinckney of Charleston, were obviously cases of this kind. Had their court-rooms been well ventilated, it may be considered as almost certain that neither of these melancholy events would have happened. Those great men were sacrifices to the barbarous manner in which the court-rooms of a community calling itself civilized had been constructed. They were profoundly learned in the laws of the land, but as profoundly ignorant or disregarding of the laws of Nature. The eminent and excellent Chief Justice of Massachusetts was just as much the victim of a violated law as the malefactors whom he was trying when he died.\*

Different races of animals exhibit to our daily observation the consequences of a more or less perfect oxygenation of the blood. Frogs, toads, lizards, and reptiles generally, are so constituted or organized, that only a part of their blood flows through their lungs at each circulation. The residue of it, therefore, goes round twice, thrice, or even more times, without imbibing oxygen or throwing off carbonic acid. Hence their general character of inactivity, dulness, and stupidity. They remain in one position and almost motionless during the greater part of their lives, and exhibit a very low form of animated existence. The standing temperature of their blood is

\* In the British House of Commons, during the memorable session of 1838, when the importance of the interests at stake, and the equal balancing of parties, occasioned an unusually close attendance and very lengthened sittings, the lives of several of the members were sacrificed in consequence of the bad condition of the air; and the health of many more, even the most robust among them, was very seriously impaired. — *Dr. A. Combe.*

several degrees lower than that of most other animals, — the natural consequence of its imperfect oxygenation. But, on the other hand, the organization and structure of most birds are such, that they breathe, in proportion to their bulk, a far greater quantity of air than man. Their standard of temperature is several degrees higher than that of the human species. Hence their vivacity and celerity of motion, or, rather, their incapability of rest. They are much upon the wing, or flitting from spray to spray, overflowing with music which seems to pour out of itself; and they evince an existence crowded with glad-some emotions. Just so far as we, by our architectural arrangements, or by our confinement of children within doors, administer impure air for their breathing; just so far do we take from them the warmth, vivacity, and joyousness of birds, and inflict upon them, in its stead, the coldness, torpor, and stupidity of frogs, toads, and lizards.

2. The second cause which prevents that due oxygenation of the blood which is so essential to health, vigor, and length of days, is *a deficiency in the size of the lungs themselves*. Men of a lively expression, florid countenance, and such great muscular activity as makes motion a pleasure, and inaction a pain, and who are so ardent that their common feelings are almost passions, — that is, men of a high sanguineous temperament, — always have a large chest. A large chest is synonymous with large lungs; for, if not interfered with, the lungs determine the size of the chest, as the brain determines the size of the cranium. Just in proportion as the capacity, or roominess, of the lungs is lessened, must the quantity of the air which is brought into contact with the blood be diminished. And, as the quantity of the air admitted to contact with the blood is diminished, in the same ratio must the oxygenation of that fluid be reduced. To have small lungs, therefore, or, what is the same thing, a small chest, is a calamity to the health, as well as a deformity to the person. All animals, in their highest state of physical development, have a full, capacious chest. Indeed, the greatest energy of the digestive organs, the richest

nutrition carried by the blood to the various parts of the system, and especially the greatest quickness and power of tension in the muscles, cannot exist without large lungs, — that is, without a large chest. As well might vegetation flourish without heat or moisture. What a deep and capacious chest have the highest specimens of that noble animal, the horse ! It is in that spacious laboratory that his fleetness and endurance are generated ; and generated so rapidly, that he champs the bit and becomes impatient of the reins that debar him from giving loose to his pent-up energies. So of the ox, whether the wild buffalo of the prairies, or the domesticated animal which is so serviceable to man. In those emblems of beauty, which, in all ages, have delighted the sculptor, the painter, and the poet ; in the lion, the swan, the dove, or the wild pigeon which cuts the air with such amazing speed, and sustains itself so long upon the wing, — in all these, the first feature which catches the artist's eye is the broad, expanded, full-rounded chest. This part of the body, then, is not only the seat of the highest energy, but the type of the most perfect elegance. Such was the universal sentiment amongst those worshippers of beauty, the Greeks. Had Phidias or Praxiteles sculptured a Jupiter with a narrow and sunken chest, or a Venus whom a contracted zone would clasp, not all the renown of their previous works, nor their countrymen's idolatry of genius, could have saved them from public insult or judicial ostracism.

Persons suffer under the misfortune and ugliness of small lungs from different causes. They come by hereditary transmission. If both the parents have small lungs, it is almost certain that their offspring will be afflicted with the same deformity. In such cases, however, the infirmity of the children may, to a great extent, be remedied by inducing them to take much exercise, especially of the chest and upper extremities, in the open air. This, if continued through childhood and youth, will result in a great expansion of these organs ; for, under favorable circumstances, Nature always seems anxious to retrieve her losses.

There are also certain mechanical trades in which the body is continually bent forward, or confined in a sitting posture, the hands being fixed at one point, and the shoulders forced round towards that point, as though they were striving to look at each other; all of which tends to cramp the chest, and to make its interior and fore part convex instead of concave, and, of course, to dwarf the size and impede the play of the lungs. In such cases, the workman should stand as much as possible, instead of sitting; and, when not engaged in his employment, should practise counteracting exercises.

The growth of the lungs may also be impeded by artificial or mechanical compression, in perverse imitation of the Chinese, who swathe the foot from birth, and confine it through life in a small, inelastic shoe; or of the tribe of Flathead Indians, who deform the head by fastening a hard board upon the frontal portion of the cranium. And the victim of Chinese fashion may as well expect to walk or dance with the grace and lightness of a Camilla, or the tribe of Flatheads to attain the intellectual stature of Lord Bacon or Dr. Franklin, as any one can expect to enjoy vigor of body, buoyancy of spirits, or energy of intellect, who is doomed by any tyrant, whether of law or of custom, to interdict the free motion and enlargement of this vital organ, the lungs. It is matter for rejoicing that those monsters of cruelty who invented the iron boot and the thumb-screw for the torture of their victims did not understand enough of physiological laws to know that they could inflict far more various and enduring tortures by enclosing the whole body in one thick-ribbed incasement, and thus, at once, counterwork all vital processes. Such a contrivance, too, would have caused not merely pain to the individual, but deterioration of the progeny; and, for all those who had any pride of family, would have been far more effectual in entailing bodily and mental imbecility, and consequent obscurity and disgrace, upon their descendants, than any attainder of blood, or act of outlawry.

To obviate the dwindling and debilitating effects of this

practice upon the race, the community must allow its children to grow up without any obstruction to the development of this vital part of their frame. The main hope of remedy lies in a better training of the young, in keeping the yoke from the necks of those who have never been degraded and enfeebled by it; for so enervating to the whole system is this practice, so deeply injurious to intellectual and moral manifestations is it to send continually, and for years, a current of unoxxygenated, black blood to the brain, that the victims of the custom become almost unable to appreciate any argument or persuasion addressed to their reason or religion. The minds of such persons run to fancies and vagaries, while common sense seems obliterated. This, indeed, might be predicted from a knowledge of physiological laws. Sapping, as the habit does, the *vital force* alike of body, intellect, and moral sentiments, it belongs to that class of offences which seem, in the very act of commission, to take away from the offender both the desire and the ability to reform, and which inflict the last act of degradation, — a willing bondage.

Let any one who has not robbed himself of the power of reflection consider, for a moment, the collocation or juxtaposition of four of the great vital organs, — the lungs, heart, stomach, and liver, — upon which a compression around the upper and central part of the body directly acts. On the right and left sides of the chest, from the neck to the diaphragm, or midway line of the trunk, are situated the lungs. Between their right and left lobes, and a little backward towards the spine, is suspended the heart, which, in its ceaseless and uninterrupted play, provides for itself just as much space as it needs. Immediately below is the stomach, which, when distended with food, is only separated from the heart and the lungs by that thin membrane the diaphragm. On the right of the stomach, and backwards to the spine, is the liver, whose secretions are so essential to the formation of healthy chyle, and to the action of the abdominal viscera. The healthy stomach, after a meal, is in continual motion, contracting and



expanding, rolling, lifting itself up, first at one end and then at the other, until the work of digestion is completed, and the organ has disburdened itself of its contents. The heaving and subsiding of the lungs at every breath, and the systole and diastole of the heart, as it alternately receives and ejects the vital stream, have, as every one knows, neither intermission nor pause from birth till death. Indeed, any intermission or pause in the action of these organs is death. If permitted to fulfil the wise ordinations of Nature, each one provides for itself ample space for all its movements. Neither interferes with or molests its fellow. They rather assist each other. The full distention of the lungs in breathing helps the contractile muscles of the stomach; and the pressure of the chyme, as it passes along the duodenum, forwards the biliary secretions.

No mechanism ever invented by the art of man runs so quietly, so forcibly, or so long. There is no clogging, no stifling, no friction. The ribs are hung on hinges, which, at every act of inhalation, open like the bows of a bellows, to enlarge the apartment where these vital organs are plying their work, and preparing the precious pabulum of life. But suppose the walls which enclose these busy operators to be so contracted, that all, in their desire for the necessary space, begin to encroach upon each other's limits. Suppose, by further compression, each one to become like a man in a crowd, unable to move hands or feet. Encumbered, choked, thwarted in its exertions, each organ will strive to thrust the others from a space which is too straitened for all; and thus the force which every one needs for completing and perfecting its own work is expended in hostile though useless aggressions upon its allies. The stomach cannot stir up the food, move it from side to side, and mingle it with the gastric solvent. The lungs from above press upon it with a dead weight. The heart can but half open for the admission, and therefore cannot contract vigorously for the swift propulsion, of the blood; and thus the momentum of its current is lost before it reaches the extremi-

ties. The liver cannot concoct its secretions, and such as it prepares are driven from it at unseasonable times. The fine lacteal ducts find only coarse and half-prepared material for nourishment, and this chokes and inflames their minute channels as they bear it onward laboriously to the blood. As an inevitable consequence, innutritious blood is poured into the right side of the heart. But, rich and strong blood being the natural stimulus of that organ, it now works languidly in forcing the stream forward to the lungs, both from want of room and of the appropriate excitement. When the lazy current of blood reaches the lungs to throw off its poisonous carbonic-acid gas, and to seek that life-giving elixir, the oxygen of the air, it finds all the air-cells crowded together and almost closed, or occupied only by corrupted air; and hence it is obliged to return to the left side of the heart almost as black and lifeless as when it emerged from the right: or, to illustrate the subject by a metaphor before used, the diver, having in vain come to the surface after air, is compelled, though at the risk of suffocation, to sink again to the bottom without refreshment. From the left side of the heart, the blood now starts upon its course a second time, without vitalization; and hence it issues in a tardy, pestiferous stream, diffusing a painful sense of languor over all the limbs, and blunting the acuteness of every sense, until at last its muddy current ascends to the sacred temple of the brain, to spread clouds and darkness through all its mansions. From this capitol of the realm it returns, again to contend with the same obstructions, and, instead of being the antagonist, to become the ally of all the chemical forces in their attack upon the citadels of life.

A single additional remark will suffice to show, that any constriction around any part of the body will impede the current that drives the machinery of life. As a general rule, the arteries, through which the blood is propelled outward from the heart, lie deep beneath the surface. This course serves to secure them from external injuries; and as the blood flows

more freely from an opened artery than from a vein, and is with more difficulty stanch'd, our exposure to its loss is greatly diminished by such an arrangement. Most of the veins, on the other hand, lie at or near the surface. In persons of high health, the veins start out, and exhibit themselves above the common surface; and this seems to have been carefully regarded by the ancient sculptors in their representations of physical strength. From the fact that so much of the blood flows near the surface, on its return to the heart and lungs, it is easy to see that any ligature around trunk or limb must impede the current as it hastens onward to renew the life which it has lost. Suppose the engine-men of the fire-department, when called out to extinguish a conflagration, should lay heavy weights all along upon the hose through which the water ought freely to flow: could they reasonably expect to subdue the flames, and save property and life from destruction? Certainly with as much reason as any person who obstructs the free flow of the blood by bands or ligatures over any part of the body can expect to enjoy a full measure of health.

The injury, however, of constricting the blood-vessels by pressure upon the surface, is different in different parts. A tight cord around the neck is fatal. Hence this mode has been adopted by several nations for executing the punishment of death upon criminals. If the structure of the human system were understood, a severe mechanical compression around the body would be considered a misfortune and a disgrace next in order to a noose about the neck. It is a less speedy process, indeed, for extinguishing life, than strangulation; but, in its effects upon the criminal and upon offspring, it inflicts the pain of a hundred deaths.

But any tight band or ligature—a hat, neck-cloth, glove, boot, shoe—fastened around any part of the body is proportionally injurious. That painful and disabling malady—swelled limbs—is oftentimes occasioned by the ignorant practice of binding something so tight upon or around the limb as

to prevent the free flow of the blood back to the heart. A rule, as universal as it is intelligible, in regard to the closeness of our garments, is, that they should always allow a free motion of the parts beneath them. If, for instance, the sleeve of a coat fits so tightly to the arm that the arm cannot turn within the sleeve without turning the sleeve also, then it is so tight as to check the circulation and to injure health. And so of any other part of the dress. But, when the body and the limbs move freely within the dress, a friction on the skin is caused which is highly salutary.

3. The third cause of an imperfect oxygenation of the blood is *the want of exercise*.

A person may have well-developed lungs, and live constantly in pure air ; and yet, *without exercise*, his blood will be but half oxygenated, and he will suffer consequent debility of body and mind.

A few simple propositions will place the relation in which we stand to active exercise in a clear light.

1. Every muscular exertion is necessarily attended by a compression of the muscle exerted ; that is, every muscle in a state of tension is more compact, and therefore occupies less space, than when it is relaxed. The muscles are respectively surrounded by or enclosed in a membranous sheath or coat, just as the arm, finger, or other part is surrounded by its skin. This sheath is always so well lubricated, that although the different muscles are close-packed together, yet they slide upon each other without embarrassment. Of the rapidity with which they must play upon one another, we may form some conception in looking at a juggler's arms or a musician's fingers. Within these sheaths (or *fascia*, as they are technically called) the whole body of the muscle, when we exercise, is compressed ; or, to use a familiar but more expressive phrase, it is *squeezed*. This compression of the muscle sends out its blood, just as the compression of any flexible tube or cylinder would send out its contents. The blood, for a reason hereafter to be stated, can move only in one direction. In the general

circulation (as distinguished from the pulmonary), the arterial blood moves outward towards the extremities. When it reaches the extremities, it passes from the arteries, through capillary tubes of almost inconceivable fineness, into the veins, where, losing its arterial character, it becomes venous blood, and flows backwards to the heart. Hence the obvious effect of every muscular effort is to quicken the circulation of the blood.

2. The blood being the natural stimulus to the action of the heart, if more blood is received, the stimulus is increased, and, of course, the pulsations of that organ are increased also, both in frequency and force. The heart must throw out as much blood as it receives; and, when an increased volume is thrown into it by the compression of the muscles, its beat must be more rapid, and, as the organ is more distended also, it must throw out more at each beat.

3. As the blood thrown from the right side of the heart has no place of escape except into the lungs, and as this fluid is also the natural stimulus of the lungs, it follows, that, as the quantity of blood injected into these organs is increased, their motions also must be accelerated.

This statement has been or may be tested by every one for himself. Let a man, while sitting in a state of perfect repose at the bottom of Bunker-hill Monument, count the number of his pulsations per minute, and take note, as well as he can, of their force. Let him also note the number of his respirations per minute, and their depth, that is, the quantity of air which he inhales at each breath; and then let him ascend the staircase, though at a moderate step, to its summit, and there compare the frequency and strength of his pulsations, and the number and fulness of his respirations, with what they were before he started, and he will find how vastly the latter exceed the former! And so of any vigorous exercise. The whole philosophy of this is, that muscular exertion — or, which is the same thing, muscular compression — sends more blood to the heart; whereupon that engine increases the rapidity and length of its strokes, to propel the current forward towards the

lungs; and then the lungs are inflated to their lowest depths to meet the increased demand of the blood for oxygen. And what is remarkable is, that we cannot by any act of the will force ourselves to deep and rapid breathing for any considerable length of time, without exercise; nor can we prevent deep and rapid breathing while engaged in strong muscular efforts. This is a natural operation, and can be effected only by using the appointed natural means.

Observe the breathing of a person long unused to exercise. If the capacity of the lungs is such that they would require one, two, or more quarts of air for their *full* inflation, such a person, while in a state of repose, will inhale scarcely half a pint, and hence will defraud himself of at least three-fourths of the vital element which his system requires. An indolent person could enjoy a full measure of health and vigor, only on condition that the whole arrangement of his physical structure, and all the laws of Nature which pertain to it, should be reversed for his accommodation.

It was stated above, that, while the lungs contain two sets of vessels for the blood, — one for its ingress, the other for its egress, — they contain but one set for the air. Hence the air returns outward through the same passages by which it entered the lungs; or, to sacrifice dignity to expressiveness of phrase, *it goes out backwards*. The consequence of this is, that feeble and shallow breathing ventilates only the upper part of the lungs. But the principal bulk of these organs lies lower down in the chest. Hence the small quantity of air taken into the lungs by an indolent person at each successive breath reaches but a part of the blood which is flowing through them. The rest of the stream passes on, lifeless and corrupting. And hence, too, that general paleness of hue, that insecurity of step, that threatening to sink or drop down while attempting to stand or sit upright, that feeling of necessity for some mechanical support around the body in order to maintain it in an erect posture, and that universal heaviness of motion, as though all the muscular bands were stretching, instead of tightening, on the

application of force, which characterize those who disdain manual labor, and look upon active exercise as derogating from personal dignity. To the eye of the physiologist or lover of Nature, these signs of feebleness are more revolting than the deformity of a hump-back or a club-foot.

The reason why the blood, on a compression of the muscles, must be driven forward, and not backward, is, that the veins are provided, at brief intervals along their whole length, with valves, which allow this fluid to pass only in one direction. It flows forward freely through these valves; but they shut to prevent its retrogression. How, except by some such mechanical contrivance, could the blood of a full-grown man, while he is in a standing posture, ascend for a distance of fifty inches from his feet to his heart? Without these valves, the weight of the whole column of blood would press upon its base; and when we consider the meandering of its streams, and the fineness of the capillary tubes through which it must pass, a force sufficient to drive it upwards to the heart, unsupported by these valves, would be almost inconceivable.

So far as the circulation of the blood is concerned, these facts show the difference between passive exercise, such as riding in a carriage or sailing in a boat, and the athletic exertions of manual labor or of gymnastic sports. Every jolt of a vehicle, of course, will drive the blood forward a little, — just as any fluid is agitated by the motion of the vessel containing it, — and the valves in the veins will prevent its falling back; but how miserable a substitute is this for that alternate compression and relaxation of the muscles, which sends the blood forward in successive and beautiful jets, which also sends forward the whole mass of the blood, not allowing, *as is the case with all slothful, inactive persons*, any stagnant, noisome pool, or even particle, to remain behind to breed corruption and offence; and which rewards with the priceless boon of health the labors of the husbandman, the artisan, or the sailor!

On the due oxygenation of the blood, and on its lively circulation through the system, depends another result, and one, too,

of the most remarkable character in the whole animal organism. I refer to the growth of the body, and the constant reproduction of its tissues.

A vulgar opinion prevails, that every part of the body of a man is changed once in seven years; so that, speaking of the corporeal substance, it might be said that no part of our frame, however gray or decrepit with age we may appear, is more than seven years old. Whether this opinion may or may not be erroneous in one sense — that is, whether a man who dies at a hundred may not carry some atom, molecule, or monad, to the grave, which he brought into life — is what we have no certain means of determining, though it is highly probable that he does not; but there can be no doubt that the saying is grossly incorrect, in making a general allowance of seven years for the renewal of the system. How many times must the skin of an infant who weighs but six or eight pounds at birth be changed, in order to accommodate itself to the gradual enlargement of its owner, until he weighs a hundred and sixty or eighty pounds! it being kept in mind that the skin has made a good “fit” during all the time. This adaptation of the envelope to the daily growth of the owner is not effected by *stretching*, for whatever is stretched in one direction must be diminished in some other; but a square inch or square foot of the skin of an adult is heavier and thicker than that of a child. During the whole period of a child’s growth, therefore, how many times must this entire integument change in every seven years, and even in a single year! The man most extravagant in his wardrobe prepares far fewer garments for his body than Nature prepares skins. And if the skin must be cast off and reproduced so many times in order to adapt itself to the growth of the parts it contains, then these parts must change nearly or quite as many times in order to suit the capacity of their covering. Look at the hands and feet of the infant and of the full-grown man, and consider with how many new pairs of each he must have been furnished for all the intermediate sizes.



But this is not all. It is supposed that every exertion of a muscle is attended by an actual loss of a portion of its substance. In the adult state, when we retain substantially the same weight from year to year, the old material which is lost is replaced only by an equal quantity of new. But, during the season of growth, not only the material which is lost must be replaced, but such an additional quantity must be added as will increase the mass or weight of the individual from day to day. Perhaps this presents to us a better idea than any thing else can of the changes from old to new which are constantly going on in a healthy body. We see it with our eyes in regard to the nails and hair. The whole of the finger-nails are changed several times a year, at least; and the hair grows far more rapidly than the nails. The particles incorporated into our system are not designed to last long; but the beauty of the operation is, that the used-up portions are skilfully taken out, one after another, and new ones, larger, stronger, and better, substituted for them. No healthy person consists of precisely the same particles for any two successive days.

How infinitely superior is this to any specimen of human workmanship! If we cause friction in any part of a machine, as in the iron band or tire of a wheel, for instance, it wears away and is gone. Not so with the hand or the foot, or any part of the body: there is a repairing energy, a constructive faculty, in these, which has the power, not only of replacing what is lost by friction, but of thickening and hardening the exposed parts. Were there any such self-protecting ability in a wooden wheel, then, when its circumference should begin to wear away, it would, of its own vital efficiency, prepare and deposit a rim of iron to protect the wood; and if this, too, were in danger of being ground off, it would then defend itself by one of steel or platinum.

What a wonderful invention should we deem it to be, if a shipwright could discover some mode by which, whenever decay or dry-rot should attack the innermost timber of his vessel,

that vessel should be endued with the power of seizing the unsound atom, and of hurrying it along from point to point, until at last it should be thrown out into the sea ; and, in the mean time, a sound particle should be seen winding its way among thick layers of iron and wood, changing its course, if need were, to avoid obstacles, though always holding on steadfast in the same general direction, until at last it should settle down in the precise place from which its predecessor had been ejected, whether that place were at the bottom of the keel or at the top of the mast ! And the wonder would be immeasurably increased, if the new particles, while they imitated the shape, should exceed the size, of their predecessors, and the process should be repeated again and again, until a pleasure-boat became a steamship or a man-of-war. Yet a process exactly like this is going on, every moment, in the body of every healthy child, and with greater rapidity and frequency in proportion to the degree of health enjoyed.

This is not mere curious speculation. These facts have the greatest practical significancy. The change of material in the body is almost exactly proportioned to the quantity of pure air breathed, and to the amount of healthy exercise taken ; because on these mainly depends the assimilation of the food. Without such change of matter, there cannot be any healthy growth ; and hence the small bones and loose flesh — as soft and puffy as though it were wind-swollen — of those children who are delicately reared. Such children cannot have elastic, bounding muscles ; for theirs are the old, flaccid muscles whose material ought to have been renewed months ago. They cannot have bright eyes and roseate cheeks ; for the old, defaced lenses of the eye are still in use, and strong exercise in the open air has never projected the blood outward to fill the vessels of the true skin with the hues of beauty and the glow of health. In regard to those young men who have suffered the misfortune of a luxurious domestic training, who have been taught to disdain labor, and have hardly been allowed to wash their own faces or tie their own shoes, it is often alleged, as an excuse for

their inaptitude, their want of dexterity and resource, in the emergencies of life, that they have never been accustomed or disciplined to contrive and to think in the adaptation of means to ends, or in tracing relations between causes and effects. But this is far from being all. Their imbecility does not come merely from a want of practice, but from their being obliged to use an old brain, the substance of which ought to have been renovated — all its fibres taken up and relaid — many times by vigorous exercises, and by a responsible application to some department of business. In such persons the half-decayed nerves have become almost non-conductors of volition; and the brain, through the want of a renewal of its substance, is too loose and spongy for the manifestation of thought. This organ, too, like all other parts of the body, being dependent upon these changes for its growth, must be *small* as well as lifeless without them, or its growth will be only in the animal, instead of the intellectual and moral regions.

On this view of the subject may be founded the true philosophical definition of Youth and Old Age. Those who, by an intelligent attention to diet, pure air, exercise, and cleanliness, cause frequent changes in the particles of which the body is composed, may be said to be *young* at any age; while those who, by over-eating, uncleanness of person, and a deficient oxygenation of the blood, whether by breathing impure air, by a compression of the chest. or by inactive habits of life, effect no such change in the constituent particles of which their bodies are composed, may, with equal truth, be called *old* at any age after the days of infancy have passed. In this sense it is often literally true that one individual at seventeen may be older than another at seventy; and some children of seven years of age are already superannuated.

In the account of the miraculous feeding of the children of Israel with manna in the wilderness, it is related that no skill could preserve the heaven-descended bread in a state of purity (with the exception of the Sabbath) but for a single day; and the sacred historian uses very pungent and unsavory words in

describing the odious qualities of that which was kept for a longer period; but the manna of the second or of the third day's keeping must have had ambrosial sweetness, as compared with the whole substance and animal economy of those who, by contemning useful labor, or thinking it ungenteel to practise vigorous exercises, fail to *renew, frequently, the whole substance of the body.*

Labor was appointed at the creation. At the same time that God made man, He made a garden, and ordered him to "dress it and keep it;" that is, to *work* in it, and, of course, to prepare the necessary utensils to aid him in its cultivation. Hence agriculture and the mechanic arts are coeval with the race, and are of divine institution. All mankind have been, now are, and we may suppose always will be, created with the same necessity for bodily exertion as Adam was. If labor were not necessary for the fruits it produces, it would be so for ourselves. Nor can I concede that those who would rear their children without some industrial occupation, or without systematic muscular exercise of some kind, are wiser than the Maker of the race; or that they love their offspring better than He loved our first parents before they had committed any transgression. Although, in a certain narrow sense, it is sometimes said that labor is a curse, yet, as it is the inevitable condition of our well-being in this life, those who strive to avoid this curse always incur a greater one.

Among the most pernicious consequences resulting from a general ignorance of Physiology is the prevalent opinion that a weakly child must be prepared for a profession, or apprenticed to some in-door occupation. The plain statement of this reasoning is, that, because a child is weak and puny at the beginning, he must be subjected by his training to further enervating processes. Instead of selecting an employment by which the feeble would be fortified, they are subjected to new debilitations. If deficiency of constitutional vigor is a plausible argument in favor of discarding healthful occupations in regard to one generation, it must be decisive for the next, and must

continue to gather force as the family deteriorates. Hence, to a great extent, that abandonment by our young men of the invigorating employments of agriculture and the handicrafts, the consequent crowding of the professions, and the eager competition for inactive occupations, — an evil self-aggravating, and reproductive of its own kind. If the weakly and ignorant father cannot work out of doors, he will be likely so to rear his children that they cannot work even in the house; and the grandchildren may be able to work nowhere. Each generation of such a lineage adds something to the stock of debility and disease which it inherits, and entails the whole upon its posterity.

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their inaptitude, their want of dexterity and resource, in the emergencies of life, that they have never been accustomed or disciplined to contrive and to think in the adaptation of means to ends, or in tracing relations between causes and effects. But this is far from being all. Their imbecility does not come merely from a want of practice, but from their being obliged to use an old brain, the substance of which ought to have been renovated — all its fibres taken up and relaid — many times by vigorous exercises, and by a responsible application to some department of business. In such persons the half-decayed nerves have become almost non-conductors of volition ; and the brain, through the want of a renewal of its substance, is too loose and spongy for the manifestation of thought. This organ, too, like all other parts of the body, being dependent upon these changes for its growth, must be *small* as well as lifeless without them, or its growth will be only in the animal, instead of the intellectual and moral regions.

On this view of the subject may be founded the true philosophical definition of Youth and Old Age. Those who, by an intelligent attention to diet, pure air, exercise, and cleanliness, cause frequent changes in the particles of which the body is composed, may be said to be *young* at any age ; while those who, by over-eating, uncleanness of person, and a deficient oxygenation of the blood, whether by breathing impure air, by a compression of the chest. or by inactive habits of life, effect no such change in the constituent particles of which their bodies are composed, may, with equal truth, be called *old* at any age after the days of infancy have passed. In this sense it is often literally true that one individual at seventeen may be older than another at seventy ; and some children of seven years of age are already superannuated. ✓

In the account of the miraculous feeding of the children of Israel with manna in the wilderness, it is related that no skill could preserve the heaven-descended bread in a state of purity (with the exception of the Sabbath) but for a single day ; and the sacred historian uses very pungent and unsavory words in

describing the odious qualities of that which was kept for a longer period; but the manna of the second or of the third day's keeping must have had ambrosial sweetness, as compared with the whole substance and animal economy of those who, by contemning useful labor, or thinking it ungenteel to practise vigorous exercises, fail to *renew, frequently, the whole substance of the body.*

Labor was appointed at the creation. At the same time that God made man, He made a garden, and ordered him to "dress it and keep it;" that is, to *work* in it, and, of course, to prepare the necessary utensils to aid him in its cultivation. Hence agriculture and the mechanic arts are coeval with the race, and are of divine institution. All mankind have been, now are, and we may suppose always will be, created with the same necessity for bodily exertion as Adam was. If labor were not necessary for the fruits it produces, it would be so for ourselves. Nor can I concede that those who would rear their children without some industrial occupation, or without systematic muscular exercise of some kind, are wiser than the Maker of the race; or that they love their offspring better than He loved our first parents before they had committed any transgression. Although, in a certain narrow sense, it is sometimes said that labor is a curse, yet, as it is the inevitable condition of our well-being in this life, those who strive to avoid this curse always incur a greater one.

Among the most pernicious consequences resulting from a general ignorance of Physiology is the prevalent opinion that a weakly child must be prepared for a profession, or apprenticed to some in-door occupation. The plain statement of this reasoning is, that, because a child is weak and puny at the beginning, he must be subjected by his training to further enervating processes. Instead of selecting an employment by which the feeble would be fortified, they are subjected to new debilitations. If deficiency of constitutional vigor is a plausible argument in favor of discarding healthful occupations in regard to one generation, it must be decisive for the next, and must

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Less . . . . .	162

In 1841-2, the number of children of all ages in all the schools <i>in summer</i> was . . . . .	183,448
Do. in 1842-3 . . . . .	138,169
Increase in the numbers attending school <i>in summer</i> , .	4,721
In 1841-2, the number of children of all ages in all the schools <i>in winter</i> was . . . . .	159,056
Do. in 1842-3 . . . . .	161,020
Increase in the numbers attending school <i>in winter</i> .	1,964
In 1841-2, the average attendance in all the schools <i>in summer</i> was . . . . .	96,525
Do. in 1842-3 . . . . .	98,316
Increase in the average attendance upon school <i>in summer</i> . . . . .	1,791
In 1841-2, the average attendance in all the schools <i>in winter</i> was . . . . .	117,542
Do. in 1842-3 . . . . .	119,989
Increase in the average attendance upon school <i>in winter</i> . . . . .	2,447

From these facts it appears that the evils of absence from school have been slightly mitigated within the last year.

How great they still continue to be will appear from the following comparison : —

The whole number of children returned as between the ages of 4 and 16 is . . . . .	184,896
Deduct twelve thousand as the number supposed to be in attendance upon academies and private schools, and not depending upon the public schools for an education . . . . .	12,000
Number dependent upon the public schools . . . . .	172,896

Number brought forward . . . .	172,896	
Average attendance in <i>summer</i> of those between 4 and 16 (deducting those <i>un- der</i> four years of age, thus) . . . .	98,816	
Number under four years of age . . . .	7,337	
	<hr/>	90,979
		<hr/>
		81,917

Which gives 90,979 as the average attendance, in *summer*, of those between *four* and sixteen years of age, who are supposed to be wholly dependent for an education upon public schools; while the average absence of the same class was 81,917, or almost one-half.

Again, as before:—

Whole number of children in the State, between four and sixteen years of age . . . .	184,896	
Deduct 12,000, as above, for those sup- posed to be in attendance upon academies and private schools, and not depending upon the public schools for an education, . . . .	12,000	
Number dependent upon public schools for an education . . . . .	172,896	
Average attendance in <i>winter</i> of those between four and sixteen (deducting those over sixteen years of age, thus) . . . . .	119,989	
Number over sixteen years of age . . . .	12,526	
Average attendance in <i>winter</i> , of those between four and sixteen, who are supposed to be wholly de- pendent for an education upon the public schools, 107,463 out of 172,896, or a little less than <i>eleven- seventeenths</i> . . . . .	107,463	

What ought the mechanic, the manufacturer, or the farmer, on a large scale, to expect, if, from any cause, he should lose



the services of his operatives or laborers for almost one-half, or even for one-third, of the time, year after year? Could he expect or deserve any thing but ruin? And can all our valued institutions be upheld on cheaper conditions than belong to the common and material interests of life?

#### APPROPRIATIONS.

In 1841-2, the amount of money raised by taxes for the support of schools, that is, for paying the wages of teachers, and for board and fuel, was . . . . \$516,051.89

Do. in 1842-3 . . . . . 510,592.02

Difference . . . . . \$5,459.87

This shows an apparent falling-off; but the towns not heard from would increase the amount to a considerably larger sum than that for the year 1841-2. Besides, there was, in fact, a generous increase in the appropriations generally, throughout the State; the great *deficit* being in the city of Boston, which expended on this item \$16,618.28 less for the last than for the preceding year.

The above-mentioned appropriations include only a part of our annual expenditures for public schools. If the cost of schoolhouses, of school-libraries, apparatus, &c., should be added, it would appear that Massachusetts now supports her public schools at an annual expense varying but little from one dollar a head for every man, woman, and child belonging to the State. This outlay being made, however, every child in the Commonwealth has a right to attend school without fee, or any further contribution whatever.

That this expenditure is not burdensome is manifest from two considerations: *first*, because it is voluntarily assessed by the inhabitants of the respective towns upon themselves; and, *secondly*, because a sum nearly equal to half as much more is annually paid by individuals to academies and private

schools, where, to a great extent, the same branches are taught as in the public schools.

In regard to the other items shown by the returns, there appears to be no material change from the last year.

The town of Brighton, in the county of Middlesex, stands this year, as it did the last, at the head of all the towns in the Commonwealth in regard to the liberality of its appropriations for the support of schools; having raised five dollars and ninety-nine cents for each child in the town between the ages of four and sixteen years.

Last year, the town of Dana, in the county of Worcester, stood at the foot of the list; but this year it has so increased its appropriation as to take an elevated and respectable stand among the towns in the State, having resigned its place at the bottom of the catalogue to the town of Pawtucket in the county of Bristol. The latter town raised but one dollar and eighteen cents for the education of each child belonging to it between the ages of four and sixteen.

#### SCHOOL-LIBRARIES.

From Jan. 1 to Dec. 31 (inclusive), 1843, the sum of money drawn by towns and school-districts from the school-fund, in behalf of school-libraries, in accordance with the resolves of March 3, 1842, and March 7, 1843, was \$11,295.00. During the same time, there has been received

into the State Treasury, in behalf of said fund,	
the sum of . . . . .	12,400.24

So that, in addition to the inestimable benefits

secured to the districts by a possession of the libraries, the capital of the school-fund has increased during the last year the sum

of . . . . .	1,105.24
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A resolve of the legislature, of the 7th March, 1843, provided that a resolve of March 3, 1842, concerning school-

district libraries, should be "extended to every city and town in the Commonwealth, not heretofore divided into school-districts, in such manner as to give as many times fifteen dollars to any such city or town as the number sixty is contained, exclusive of fractions, in the number of children between the ages of four and sixteen years in said city or town; provided evidence be produced to the treasurer, in behalf of said city or town, of its having raised and appropriated for the establishment of libraries a sum equal to that which, by the provision of this resolve, it is entitled to receive from the school-fund." In regard to this resolve, my opinion has been asked; whether a town "not divided into school-districts" could make any such provision for *a part of its children* as would entitle it to receive the bounty of the State: that is, to make the case as simple as possible, suppose a town has one hundred and twenty children between four and sixteen; can it, by appropriating fifteen dollars in behalf of sixty of those children, make a valid demand for fifteen dollars upon the school-fund? or must it appropriate thirty dollars in behalf of the one hundred and twenty children before it can receive any thing from that fund? To this inquiry I have not hesitated to reply, that I believe a sound construction of the resolve, as well as sound policy, requires that a town not districted should appropriate a sum sufficient for all its children as a condition precedent to receiving any thing. Should a different construction prevail, the very object of the resolve might be defeated in regard to the most necessitous portion of our children. A few men, connected with wealthy and large schools in central and populous places, might raise the requisite sum for their own schools by voluntary contribution, and then vote against the granting of a town-tax for supplying libraries to the poor and sparsely-populated portions of the town; while such portions, having no corporate powers as districts, and feeling unable to raise the requisite amount by contribution, might for a long time, if not always, be deprived of the benefits of a library. When a town ad-

ministers its schools in its corporate capacity, it must legislate uniformly for all parts of its territory and for all its children.

Towards the close of the last year, but too late for an insertion of the fact in my last Annual Report, I was authorized and requested by the Honorable Martin Brimmer, the present mayor of the city of Boston, to cause to be printed, at his expense, such a number of copies of an excellent work on education, entitled "The School and the Schoolmaster," as would supply one copy each to all the school-districts, and one copy each to all the boards of school-committee-men, in the Commonwealth. This commission was most joyfully executed on my part; and, during the months of February and March last, the volumes were all prepared and ready for distribution. I authorized the school-committee-men of the respective towns to receive the donation in behalf of themselves and of the several districts within their jurisdiction; and by circulars, and in various other ways, the most extensive publicity to the fact was given. The work was of great value, having been prepared by the joint labors of the Rev. Dr. A. Potter, of Union College, Schenectady, N.Y., and of George B. Emerson, Esq., of Boston, Mass.,—both distinguished writers and educators. The great body of the volumes was soon called for. They have been read extensively, and with great satisfaction and profit; and the gratitude of the community has been expressed, as with one voice, towards the donor, both for the generosity that prompted the gift, and the judgment that dictated the selection.

This brings to a close what I have to say in reference to the condition and progress of education in Massachusetts during the last year.

For the six years during which I have been honored with an appointment to the office of Secretary of the Board of Education, I have spared neither labor nor expense in fulfilling not only that provision of the law which requires that "the Secretary shall collect information," but also that injunction, not less important, that he shall "diffuse as widely as possible,

throughout every part of the Commonwealth, information of the most approved and successful methods of arranging the studies and conducting the education of the young." For this purpose, I have visited schools in most of the free States and in several of the slave States of the Union; have made myself acquainted with the different laws relative to public instruction which have been enacted by the different legislatures of our country; have attended great numbers of educational meetings, and, as far as possible, have read whatever has been written, whether at home or abroad, by persons qualified to instruct mankind on this momentous subject. Still I have been oppressed with a painful consciousness of my inability to expound the merits of this great theme in all their magnitude and variety, and have turned my eyes again and again to some new quarter of the horizon, in the hope that they would be greeted by a brighter beam of light. Under these circumstances, it was natural that the celebrity of institutions in foreign countries should attract my attention, and that I should feel an intense desire of knowing whether, in any respect, those institutions were superior to our own; and, if any thing were found in them worthy of adoption, of transferring it for our improvement.

Accordingly, early last spring, I applied to the Board for permission to visit Europe, *at my own expense*, during the then ensuing season, that I might make myself personally acquainted with the nature and workings of their systems of public instruction, — especially in those countries which had long enjoyed the reputation of standing at the head of the cause.

In addition to this, the severe and unmitigated labor which I had been called to perform during the last six years, in discharging the duties of my office, had exhausted my whole capital of health; and I felt, that, without some change or relief, my labors in the cause would soon be brought to an inevitable close.

I am happy to add that Gov. Morton, as Chairman of the Board, and all the other members of that body, signified their

cordial approval of my plan, and gave me their full consent.

Accordingly, on the 1st of May last, I embarked for Europe; and, before the end of thirteen days, I was visiting schools on the other side of the Atlantic.

In my travels, I visited England, Ireland, and Scotland; crossed the German Ocean to Hamburg; thence went to Magdeburg, Berlin, Potsdam, Halle, and Weissenfels, in the kingdom of Prussia; to Leipsic and Dresden, the two great cities in the kingdom of Saxony; thence to Erfurt, Weimar, Eisenach, &c., on the great route from the middle of Germany to Frankfort on the Maine; thence to the Grand Duchy of Nassau, of Hesse Darmstadt, and of Baden; and, after visiting all the principal cities in the Rhenish Provinces of Prussia, passed through Holland and Belgium to Paris.

In the course of this tour, I have seen many things to deplore and many to admire. / I have visited countries where there is no national system of education at all, and countries where the minutest details of the schools are regulated by law. I have seen schools in which each word and process, in many lessons, was almost overloaded with explanations and commentary; and many schools in which four or five hundred children were obliged to commit to memory, in the Latin language, the entire book of Psalms and other parts of the Bible, neither teachers nor children understanding a word of the language which they were prating. I have seen countries in whose schools all forms of corporal punishment were used without stint or measure; and I have visited one nation in whose excellent and well-ordered schools scarcely a blow has been struck for more than a quarter of a century. On reflection, it seems to me that it would be most strange, if, from all this variety of system and of no system, of sound instruction and of babbling, of the discipline of violence and of moral means, many beneficial hints for our warning or our imitation could not be derived; and as the subject comes clearly within the purview of my duty, "to collect and diffuse information re-

specting schools," I venture to submit to the Board some of the results of my observations.

On the one hand, I am certain that the evils to which our own system is exposed, or under which it now labors, exist in some foreign countries in a far more aggravated degree than among ourselves; and if we are wise enough to learn from the experience of others, rather than await the infliction consequent upon our own errors, we may yet escape the magnitude and formidableness of those calamities under which some other communities are now suffering.

✓ On the other hand, I do not hesitate to say, that there are many things abroad which we, at home, should do well to imitate; things, some of which are here, as yet, mere matters of speculation and theory, but which, there, have long been in operation, and are now producing a harvest of rich and abundant blessings./

Among the nations of Europe, Prussia has long enjoyed the most distinguished reputation for the excellence of its schools. In reviews, in speeches, in tracts, and even in graver works devoted to the cause of education, its schools have been exhibited as models for the imitation of the rest of Christendom. For many years, scarce a suspicion was breathed that the general plan of education in that kingdom was not sound in theory and most beneficial in practice. Recently, however, grave charges have been preferred against it by high authority. The popular traveller, Laing, has devoted several chapters of his large work on Prussia to the disparagement of its school-system. An octavo volume, entitled "The Age of Great Cities," has recently appeared in England, in which that system is strongly condemned; and during the pendency of the famous "Factories' Bill" before the British House of Commons, in 1843, numerous tracts were issued from the English press, not merely calling in question, but strongly denouncing, the whole plan of education in Prussia, as being not only designed to produce, but as actually producing, a spirit of blind acquiescence to arbitrary power, in things spiritual as well as temporal, — as

being, in fine, a system of education adapted to enslave, and not to enfranchise, the human mind. And even in some parts of the United States, the very nature and essence of whose institutions consist in the idea that the people are wise enough to distinguish between what is right and what is wrong, — even here some have been illiberal enough to condemn, in advance, every thing that savors of the Prussian system, because that system is sustained by arbitrary power.

My opinion of these strictures will appear in the sequel. But I may here remark, that I do not believe either of the first two authors above referred to had ever visited the schools they presumed to condemn. The English tract-writers, too, were induced to disparage the Prussian system from a motive foreign to its merits. The "Factories' Bill," which they so vehemently assailed, proposed the establishment of schools to be placed under the control of the church. Against this measure, the dissenters wished to array the greatest possible opposition. As there was a large party in the kingdom who doubted the expediency of any interference on the part of government in respect to public education, it was seen that an argument derived from the alleged abuses of the Prussian system could be made available to turn this class into opponents of the measure then pending in Parliament. Thus the errors of that system, unfortunately, were brought to bear, not merely against proselytizing education, but against education itself.

But, allowing all these charges against the Prussian system to be true, there were still two reasons why I was not deterred from examining it.

In the first place, the evils imputed to it were easily and naturally separable from the good which it was not denied to possess. If the Prussian schoolmaster has better methods of teaching reading, writing, grammar, geography, arithmetic, &c., so that, in half the time, he produces greater and better results, surely we may copy his modes of teaching these elements, without adopting his notions of passive obedience to government, or of blind adherence to the articles of a church. By



the ordinance of Nature, the human faculties are substantially the same all over the world ; and hence the best means for their development and growth in one place must be substantially the best for their development and growth everywhere. The spirit which shall control the action of these faculties when matured, which shall train them to self-reliance or to abject submission, which shall lead them to refer all questions to the standard of reason or to that of authority, — this spirit is wholly distinct and distinguishable from the manner in which the faculties themselves should be trained ; and we may avail ourselves of all improved methods in the earlier processes, without being contaminated by the abuses which may be made to follow them. The best style of teaching arithmetic or spelling has no necessary or natural connection with the doctrine of hereditary right ; and an accomplished lesson in geography or grammar commits the human intellect to no particular dogma in religion.

In the second place, if Prussia can pervert the benign influences of education to the support of arbitrary power, we surely can employ them for the support and perpetuation of republican institutions. A national spirit of liberty can be cultivated more easily than a national spirit of bondage ; and, if it may be made one of the great prerogatives of education to perform the unnatural and unholy work of making slaves, then surely it must be one of the noblest instrumentalities for rearing a nation of freemen. If a moral power over the understandings and affections of the people may be turned to evil, may it not also be employed for good ?

Besides, a generous and impartial mind does not ask whence a thing comes, but what it is. Those who, at the present day, would reject an improvement because of the place of its origin, belong to the same school of bigotry with those who inquired if any good could come out of Nazareth ; and what infinite blessings would the world have lost had that party been punished by success ! Throughout my whole tour, no one principle has been more frequently exemplified than this, — that

wherever I have found the best institutions, — educational, reformatory, charitable, penal, or otherwise, — there I have always found the greatest desire to know how similar institutions were administered among ourselves; and, where I have found the worst, there I have found most of the spirit of self-complacency, and even an offensive disinclination to hear of better methods.

The examination of schools, schoolhouses, school-systems, apparatus, and modes of teaching, has been my first object, at all times and places. Under the term “schools,” I here include all elementary schools, whether public or private; all normal schools; schools for teaching the blind and the deaf and dumb; schools for the reformation of juvenile offenders; all charity foundations for educating the children of the poor, or of criminals; and all orphan establishments, of which last class there are such great numbers on the Continent. When practicable and useful, I have visited gymnasias, colleges, and universities; but, as it is not customary in these classes of institutions to allow strangers to be present at recitations, I have had less inducement to see them.\*

\* When not engaged in visiting schools, I have visited great numbers of hospitals for the insane and for the sick, and also of prisons. This I have done not only from a rational curiosity to know in what manner these classes of our fellow-beings are treated abroad, but in the hope of finding something by which we might be enlightened and improved in the management of the same classes at home.

In regard to lunatic asylums, I have seen none superior, nor any in all respects equal, to our State institution at Worcester.

In regard to prisons, I have found them, almost uniformly, and especially on the Continent, in a most deplorable condition, — often worse than any of ours were twenty-five years ago, before the commencement amongst us of that great reform in prison discipline which has already produced such beneficial results. Great Britain, however, now furnishes some admirable models for the imitation of the world. In the city of Dublin, I visited a prison containing about three hundred female convicts. It was superintended by a female. The whole was a perfect pattern of neatness, order, and decorum; and the moral government was as admirable as the material administration. As the lady-principal conducted me to the different parts of the establishment, speaking to me with such sorrow and such hope of the different subjects of her charge, and addressing them as one who came to console and to save, and not to punish or avenge, — always in tones of the sweetest affection, yet modified to suit the circumstances of each offender, — I felt, more vividly than I had ever done before, to what a sublime height of excellence the female

I have seen no institution for the blind equal to that under the care of Dr. Howe, at South Boston ; nor but one, indeed (at Amsterdam), worthy to be compared with it. In many of them, the blind are never taught to read ; and in others they learn only a handicraft, or some mere mechanical employment. Generally speaking, however, music is taught ; and in Germany, where the blind, like all other classes of society, are taught music very thoroughly, I saw a common mode of performance on the organ which is very unusual in America. The organs were constructed with a set of keys for the feet, so that the feet could always play an accompaniment to the hands.

In Paris, the new edifice for the blind now just completed is, in its architectural construction and arrangement, an admirable model for this class of institutions.

In regard to the instruction given to the deaf and dumb, I am constrained to express a very different opinion. The schools for this class, in Prussia, Saxony, and Holland, seem to me decidedly superior to any in this country. The point of difference is fundamental. With us, the deaf and dumb are taught to converse by signs made with the fingers. There, incredible as it may seem, they are taught to *speak* with the lips and tongue. That a person utterly deprived of the organs of hearing — who, indeed, never knew of the existence of voice or sound — should be able to *talk*, seems almost to transcend the limits of possibility ; and surely that teacher is entitled to the character of a great genius as well as benefactor, who conceived, and successfully executed, a plan, which, even after it is accomplished, the world will scarcely credit. In the countries last named, it seems almost absurd to speak of the *dumb*. There are hardly any dumb there ; and the sense of hearing, when lost, is almost supplied by that of sight.

character can reach, when it consecrates its energies to the work of benevolence. Amid these outcasts from society, she spends her days and her nights ; but, with her convictions and sentiments of duty and of charity towards the lost, they must be days and nights which afford her more substantial and enduring happiness than queens, or those who by their fascinations govern the governors of man, can ever enjoy.

It is a great blessing to a deaf mute to be able to converse in the language of signs. But it is obvious, that, as soon as he passes out of the circle of those who understand that language, he is as helpless and hopeless as ever. The power of uttering articulate sounds — of speaking as others speak — alone restores him to society. That this can be done, and substantially in all cases, I have had abundant proof; nay, though an entire stranger, and speaking a foreign language, I have been able to hold some slight conversation with deaf and dumb pupils who had not completed half their term of study.

With us, this power of conferring the gift of speech upon the deaf and dumb is so novel a fact, and, as it seems to me, one of such intrinsic importance, that I feel authorized, if not required, to give a brief description of the mode in which it is effected.

It is a common opinion, in regard to deaf and dumb persons, that the organs of speaking, as well as the organs of hearing, are defective; but this is an error, the incapacity to speak resulting only from the incapacity to hear.

#### MODE OF TEACHING THE DEAF AND DUMB TO SPEAK BY THE UTTERANCE OF ARTICULATE SOUNDS.

An uninstructed deaf and dumb child must arrive at a considerable age before he would be conscious of the fact of breathing; that is, before his mind would propose to itself, as a distinct idea, that he actually inhales and exhales air. Having no ear, it would be still later before he would recognize any distinction between such inhalations and expulsions of the air as would be accompanied by sound, and such as would not. The first step, therefore, in the instruction of a deaf and dumb child, is to make him conscious of these facts. To give him a knowledge of the fact that he breathes, the teacher, seating himself exactly opposite to the light, takes the pupil upon his lap or between his knees, so that the pupil's eye shall be on a level with his own, and so that they can look each other directly

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in the face. The teacher now takes the pupil's right hand in his left, and the pupil's left hand in his right. He places one of the pupil's hands immediately before his own lips, and breathes upon it. He then brings the pupil's other hand into the same position before his (the pupil's) lips, and, through the faculty of imitation, leads him to breathe upon that, just as his first hand had been breathed upon by the teacher. This exercise is varied indefinitely as to stress or intensity of breathing; and the lessons are repeated again and again, if necessary, until, in each case, the feeling caused by the expulsion of air from the pupil's mouth on the back of one hand becomes identical with the feeling on the back of the other hand caused by the expulsion of air from the teacher's mouth. Sometimes a little play mingles with the instruction; and a light object, as a feather or a bit of paper, is blown by the breath.

Another accompaniment of simple breathing is the expansion and subsidence of the chest, as the air is alternately drawn into it and expelled from it. To make the pupil acquainted with this fact, one of his hands is held before the teacher's mouth, as above described, while the other is laid closely upon his breast. The pupil readily perceives the falling motion of the chest when the air is emitted from the lungs, and the rising motion when it is inhaled. His hands are then transferred to his own mouth and chest, where the same acts, performed by himself, produce corresponding motions and sensations. These processes must, of course, be continued for a greater or less length of time, according to the aptitude of the scholar.

The next step is to teach the *fact of sounds*, and their effect or value. For this purpose, a third person should be present, standing with the back towards the teacher and pupil. The teacher and pupil being placed as before, and the teacher holding the back of one of the pupil's hands before his (the teacher's) mouth, and placing the other upon his breast, breathes as before. The only effect of this is the mere physical sensations produced upon the pupil's hands. But now the teacher

speaks with a loud voice, and the person present turns round to answer. The same effect would be produced by calling upon a dog or other domestic animal. Here the pupil perceives an entire new state of facts. The speaking is accompanied by a new position of the organs of speech, and by a greatly increased action of the chest; and it is immediately followed by a movement or recognition on the part of the third person. The pupil's hands are then transferred to his own mouth and chest, and he is led to shape his organs of speech in imitation of the teacher's, and to make those strong emissions of breath which produce sound. When this sound has been produced by the pupil, both the teacher and the third person intimate, by their attention and their approval, that a new thing has been done; and, from that moment, the peculiar effort and the vibrations necessary to the utterance of sounds are new facts added to the pupil's store of knowledge.

These exercises having been pursued for a sufficient length of time, the teacher begins to instruct in the elementary sounds. The letter *h* is the first taught, being only a hard breathing, and therefore forming the connecting link between simple breathing and the utterance of the vowel-sounds.

Here it is obvious that the teacher must be a perfect master of the various sounds of the language, and of the positions into which all the vocal organs must be brought in order to enunciate them. All the combined and diversified motions and positions of lips, teeth, tongue, uvula, glottis, windpipe, and so forth, must be as familiar to him as the position of keys or chords to the performer on the most complicated musical instrument. For this purpose, all the sounds of the language — and of course all the motions and positions of the organs necessary to produce them — are reduced to a regular series or gradation. The variations requisite for the vowel-sounds are formed into a regular sequence; and a large table is prepared in which the consonant-sounds are arranged in a scientific order. To indicate the difference between a long and a short sound, a long sound is uttered accompanied by a slow



piece of white paper for instance, a piece of gray is given him, and, when he intimates that he asked for *white*, the question is written down with the word "white" underscored, and then a piece of white paper is given. Another exercise teaches him a corresponding stress of the voice in speaking.

An extraordinary fact, and one which throws great light upon the constitution of the mind, is, that the deaf and dumb, after learning to read, take great delight in poetry. The measure of the verse wakes up a dormant faculty within them, giving them the pleasure of what we call *time*, although they have no ear to perceive it.

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Mr. Hill also mentions instances in which the facility acquired is so great, that the motions of the face can be read by the deaf and dumb when only a side view of the countenance can be obtained, and consequently only a partial play of the muscles seen.

The following are among the reasons which the German teachers of the deaf and dumb give for preferring the method of speaking by the voice to that of speaking by signs on the fingers and by pantomime: —

1. Loud speaking is the most convenient mode of intercourse, and the one most in accordance with human nature.
2. The deaf and dumb, as well as the man possessed of all

his senses, has a natural impulse to express his feelings, thoughts, &c., by sounds.

In confirmation of this reason, I may say, that it is remarkably confirmed by the case of Laura Bridgman, who, though deaf, dumb, and blind, makes a different sound — though an inarticulate one, a mere noise — for each of her acquaintances.

3. Experience has long shown, that even those who are born deaf and dumb, and still more those who have become so later in life, can attain fluency in oral expression.

4. Experience has also shown, that, with the deaf and dumb who have acquired a facility in speaking, all subsequent instruction is more successful than with those who have been taught merely the language of signs and writing.

5. Loud speaking is of great use to the deaf and dumb, not only as a means of learning, but of imparting their knowledge. They learn by imparting, and thus obtain more definite ideas of what they already know. It is a means of further cultivation, also, even when it is wearisome, monotonous, inexpressive, or absolutely disagreeable; for people soon become accustomed even to such imperfect speech, as to the imperfect speech of a little child. The peculiar advantages even of a low degree of acquisition are, 1. The exercise and strengthening of the lungs. 2. The aid it gives to the comprehension and retaining of words, as well as to the power of recalling them to memory. 3. It has an extraordinary humanizing power; the remark having been often made, and with truth, that all the deaf and dumb who have learned to speak have a far more human expression of the eye and countenance than those who have only been taught to write.

6. Important as speaking is for easy intercourse with others, it is quite as important, indeed more so, to many of the deaf and dumb, to acquire a facility in comprehending what is spoken to themselves; because very few of those who have intercourse with the deaf and dumb have time, means, or inclination to hold written communication with them. But, if the deaf and dumb have acquired the art of reading language

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As a consequence of the above views, the German teachers of the deaf and dumb prohibit, as far as possible, all intercourse by the artificial language of signs, in order to enforce upon the pupils the constant use of the voice. At a later period, however, all are taught to write.

I found a class in the school for the deaf and dumb in Paris, which the instructor was endeavoring to teach to speak orally; but it is not certain that the experiment will succeed in the French language,—that language having so many similar sounds for different ideas. With the English language, however, a triumph over this great natural imperfection might undoubtedly be won; and it was an object—certainly with *some* of the Trustees of the Perkins Institution for the Blind, when they petitioned the legislature last winter for power to incorporate upon that institution a department for the deaf and dumb—to exchange the limited language of signs for the universal language of words, in the instruction of this class of children in our State. Had the members of the legislature seen and heard what I have now often seen and heard, but which I then knew of only by report, I cannot but believe that that application would have found a different fate.

The success in teaching the deaf and dumb in Germany, and the means by which it is accomplished, furnish some invaluable hints in regard to the teaching of other children.

1. In teaching these children to speak, if difficult and complicated sounds are given before easy and simple ones, some of the vocal organs will be at fault, in regard either to position or motion; and, if the error is continued but for a short period, false habits will be acquired, which it will be almost impossible

I have seen no institution for the blind equal to that under the care of Dr. Howe, at South Boston ; nor but one, indeed (at Amsterdam), worthy to be compared with it. In many of them, the blind are never taught to read ; and in others they learn only a handicraft, or some mere mechanical employment. Generally speaking, however, music is taught ; and in Germany, where the blind, like all other classes of society, are taught music very thoroughly, I saw a common mode of performance on the organ which is very unusual in America. The organs were constructed with a set of keys for the feet, so that the feet could always play an accompaniment to the hands.

In Paris, the new edifice for the blind now just completed is, in its architectural construction and arrangement, an admirable model for this class of institutions.

In regard to the instruction given to the deaf and dumb, I am constrained to express a very different opinion. The schools for this class, in Prussia, Saxony, and Holland, seem to me decidedly superior to any in this country. The point of difference is fundamental. With us, the deaf and dumb are taught to converse by signs made with the fingers. There, incredible as it may seem, they are taught to *speak* with the lips and tongue. That a person utterly deprived of the organs of hearing — who, indeed, never knew of the existence of voice or sound — should be able to *talk*, seems almost to transcend the limits of possibility ; and surely that teacher is entitled to the character of a great genius as well as benefactor, who conceived, and successfully executed, a plan, which, even after it is accomplished, the world will scarcely credit. In the countries last named, it seems almost absurd to speak of the *dumb*. There are hardly any dumb there ; and the sense of hearing, when lost, is almost supplied by that of sight.

character can reach, when it consecrates its energies to the work of benevolence. Amid these outcasts from society, she spends her days and her nights ; but, with her convictions and sentiments of duty and of charity towards the lost, they must be days and nights which afford her more substantial and enduring happiness than queens, or those who by their fascinations govern the governors of man, can ever enjoy.

It is a great blessing to a deaf mute to be able to converse in the language of signs. But it is obvious, that, as soon as he passes out of the circle of those who understand that language, he is as helpless and hopeless as ever. The power of uttering articulate sounds — of speaking as others speak — alone restores him to society. That this can be done, and substantially in all cases, I have had abundant proof; nay, though an entire stranger, and speaking a foreign language, I have been able to hold some slight conversation with deaf and dumb pupils who had not completed half their term of study.

With us, this power of conferring the gift of speech upon the deaf and dumb is so novel a fact, and, as it seems to me, one of such intrinsic importance, that I feel authorized, if not required, to give a brief description of the mode in which it is effected.

It is a common opinion, in regard to deaf and dumb persons, that the organs of speaking, as well as the organs of hearing, are defective; but this is an error, the incapacity to speak resulting only from the incapacity to hear.

#### MODE OF TEACHING THE DEAF AND DUMB TO SPEAK BY THE UTTERANCE OF ARTICULATE SOUNDS.

An uninstructed deaf and dumb child must arrive at a considerable age before he would be conscious of the fact of breathing; that is, before his mind would propose to itself, as a distinct idea, that he actually inhales and exhales air. Having no ear, it would be still later before he would recognize any distinction between such inhalations and expulsions of the air as would be accompanied by sound, and such as would not. The first step, therefore, in the instruction of a deaf and dumb child, is to make him conscious of these facts. To give him a knowledge of the fact that he breathes, the teacher, seating himself exactly opposite to the light, takes the pupil upon his lap or between his knees, so that the pupil's eye shall be on a level with his own, and so that they can look each other directly

in the face. The teacher now takes the pupil's right hand in his left, and the pupil's left hand in his right. He places one of the pupil's hands immediately before his own lips, and breathes upon it. He then brings the pupil's other hand into the same position before his (the pupil's) lips, and, through the faculty of imitation, leads him to breathe upon that, just as his first hand had been breathed upon by the teacher. This exercise is varied indefinitely as to stress or intensity of breathing; and the lessons are repeated again and again, if necessary, until, in each case, the feeling caused by the expulsion of air from the pupil's mouth on the back of one hand becomes identical with the feeling on the back of the other hand caused by the expulsion of air from the teacher's mouth. Sometimes a little play mingles with the instruction; and a light object, as a feather or a bit of paper, is blown by the breath.

Another accompaniment of simple breathing is the expansion and subsidence of the chest, as the air is alternately drawn into it and expelled from it. To make the pupil acquainted with this fact, one of his hands is held before the teacher's mouth, as above described, while the other is laid closely upon his breast. The pupil readily perceives the falling motion of the chest when the air is emitted from the lungs, and the rising motion when it is inhaled. His hands are then transferred to his own mouth and chest, where the same acts, performed by himself, produce corresponding motions and sensations. These processes must, of course, be continued for a greater or less length of time, according to the aptitude of the scholar.

The next step is to teach the *fact of sounds*, and their effect or value. For this purpose, a third person should be present, standing with the back towards the teacher and pupil. The teacher and pupil being placed as before, and the teacher holding the back of one of the pupil's hands before his (the teacher's) mouth, and placing the other upon his breast, breathes as before. The only effect of this is the mere physical sensations produced upon the pupil's hands. But now the teacher

speaks with a loud voice, and the person present turns round to answer. The same effect would be produced by calling upon a dog or other domestic animal. Here the pupil perceives an entire new state of facts. The speaking is accompanied by a new position of the organs of speech, and by a greatly increased action of the chest; and it is immediately followed by a movement or recognition on the part of the third person. The pupil's hands are then transferred to his own mouth and chest, and he is led to shape his organs of speech in imitation of the teacher's, and to make those strong emissions of breath which produce sound. When this sound has been produced by the pupil, both the teacher and the third person intimate, by their attention and their approval, that a new thing has been done; and, from that moment, the peculiar effort and the vibrations necessary to the utterance of sounds are new facts added to the pupil's store of knowledge.

These exercises having been pursued for a sufficient length of time, the teacher begins to instruct in the elementary sounds. The letter *h* is the first taught, being only a hard breathing, and therefore forming the connecting link between simple breathing and the utterance of the vowel-sounds.

Here it is obvious that the teacher must be a perfect master of the various sounds of the language, and of the positions into which all the vocal organs must be brought in order to enunciate them. All the combined and diversified motions and positions of lips, teeth, tongue, uvula, glottis, windpipe, and so forth, must be as familiar to him as the position of keys or chords to the performer on the most complicated musical instrument. For this purpose, all the sounds of the language — and of course all the motions and positions of the organs necessary to produce them — are reduced to a regular series or gradation. The variations requisite for the vowel-sounds are formed into a regular sequence; and a large table is prepared in which the consonant-sounds are arranged in a scientific order. To indicate the difference between a long and a short sound, a long sound is uttered accompanied by a slow



motion of the hand, and then a short sound of the same vowel accompanied by a quick motion.

As the pupil has no ear, he cannot, strictly speaking, be said to learn sounds: he only learns motions and vibrations, the former by the eye, the latter by the touch. The parties being seated as I have before described, so that the light shines full upon the teacher's face, one of the pupil's hands is placed upon the teacher's throat, while he is required at the same time to look steadfastly at the teacher's mouth. The simplest sound of the vowel *a* is now uttered and repeated by the teacher. He then applies the pupil's other hand to his (the pupil's) throat, and leads him to enunciate sounds until the vibrations produced in his own throat resemble those which had been produced by the utterance of the teacher. At this stage of the instruction, the pupil understands perfectly what is desired; and, therefore, he perseveres with effort after effort, until at last, perhaps after a hundred or five hundred trials, he hits the exact sound, when, conscious of the same vibration in his own organs which he had before felt in those of the teacher, at the same moment that the teacher recognizes the utterance of the true sound, their countenances glow into each other with the original light of joy, and not only is a point gained in the instruction which will never be lost, but the pupil is animated to renewed exertions.

The sound of the German vowels being so different from our own, it is difficult to elucidate this subject to one not acquainted with the German language. But let any one lay his finger upon the middle of the upper side of the *pomum adami*, and press it against the wind-pipe, and then enunciate successively the sounds of the letters *a* and *e*, and he will instantaneously perceive how much higher that part of the throat is raised, and how much more it is brought forward, in the latter case than in the former. And not only is there a striking difference in the motions of the wind-pipe when these two vowels are sounded, but, in sounding the letter *e*, almost all the vocal organs are changed from the position which is necessary for

enunciating the letter *a*. The tongue is brought much nearer to the roof of the mouth, the lips are partially drawn together, and the whole under jaw is raised nearer to the upper. Thus every different sound in the language requires a different position and different motions of the vocal organs. Hence the work of teaching the deaf and dumb to speak consists in training them to arrange the organs of speech into all these positions, and to practise at will all this variety of motions. When the pupil looks at the organs of the teacher, and feels of them, then their positions and motions become to him a visible and tangible alphabet, just as our spoken alphabet is an audible one. For the guttural sounds, the hand must be placed upon the throat. For the nasal, the teacher holds one of the pupil's fingers lightly against one side of the lower or membranous part of the nose, and, after the vibration there has been felt, places another of his fingers against the same part of his own nose.

During all these processes, the eye is most actively employed. The teacher arranges his own organs in the manner necessary for the production of a given sound, and holds them in that position until the pupil can arrange his own in the same way. Sometimes the pupil is furnished with a mirror, that he may see that his own organs are conformed to those of the teacher. If any part of the pupil's tongue is unmanageable, the teacher takes his *spatula* (an instrument of ivory or horn in the shape of a spoon-handle), and raises or depresses it, as the case may require.

But some of the elementary sounds are begun or completed with closed lips; and in such case, the cheeks not being made of glass, the pupil cannot see the position or motions of the tongue. To obviate this difficulty, Mr. Reich of Leipsic uses a tongue made of Indian rubber, which he can bend or twist at pleasure, till it becomes a type or model of the form he wishes the pupil's tongue to assume.

Later in the course of instruction, the pupils are taught the meaning of Italic letters and emphasis. If a child asks for a

piece of white paper for instance, a piece of gray is given him, and, when he intimates that he asked for *white*, the question is written down with the word "white" underscored, and then a piece of white paper is given. Another exercise teaches him a corresponding stress of the voice in speaking.

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The success in teaching the deaf and dumb in Germany, and the means by which it is accomplished, furnish some invaluable hints in regard to the teaching of other children.

1. In teaching these children to speak, if difficult and complicated sounds are given before easy and simple ones, some of the vocal organs will be at fault, in regard either to position or motion; and, if the error is continued but for a short period, false habits will be acquired, which it will be almost impossible

for any subsequent skill or attention to eradicate. No un instructed person, therefore, should tamper with this subject. No one should attempt to teach the deaf and dumb to speak who has not carefully read the best treatises upon the art, or witnessed the practice of a skilful master. The effect of false instruction in regard to the voice-producing muscles furnishes a striking analogy to that false mental instruction given by incompetent parents and teachers, by which all the intellectual and moral fibres of a child's nature are coiled and knotted into a tangle of errors, from which they can never be wholly extricated even by a life of exertion.

2. After a few of the first lessons, it is ordinarily found that the keenest relish for knowledge is awakened in the minds of the pupils. They evince the greatest desire for new lessons, and a pleasure that seems almost ludicrously disproportionate in the acquisition of the most trivial things. This arises, in the first place, from that appetite for knowledge which Nature gives to all her children; and, in the second place, from the teacher's arranging all subjects of instruction in a scientific order, and giving to his pupils, from the beginning, distinct and luminous ideas of all he teaches. Were instruction so arranged and administered in regard to other children, we might, as a general rule, expect similar results.

So ardent, indeed, is the thirst of the deaf and dumb children for knowledge, that one of the most frequent cautions given to teachers by the masters of the art is, not to indulge them in the gratification of their desires to such a degree as to impair health or produce injurious mental excitement.

3. Perhaps no relation in life illustrates the necessity or the value of love and confidence between teacher and pupil more strikingly than this. Conceive of a child placed before his teacher, watching every shade of muscular motion with his eye, catching the subtlest vibrations with his hand, and expending his whole soul in striving to conjecture what muscles are to be moved; and then suppose the feeling of shame or mortification, of fear or fright, to be superinduced, withdrawing

all attention from eye and hand, choking the utterance and paralyzing all the faculties; and, were the pupil to remain in this state till he became as old as Methuselah, he would never succeed in uttering even an elementary sound, unless it might be that of the interjection O! Such, though to a less extent, is the obstruction which fear, or contemptuous manners in a teacher, oppose to the progress of all children.

In comparing the present condition of the deaf and dumb and the blind with what it was only a few years ago, there is one fact too significant to be omitted. Judge Blackstone published his celebrated Commentaries on the English law in 1765. In vol. i., book 1, chap. 8, there occurs the following sentence, which was then the acknowledged law in Westminster Hall, and for which he quotes Lord Coke, Fitzherbert, and others:—

“A man who is born deaf, dumb, and blind, is looked upon by the law as in the same state with an idiot; he being supposed incapable of any understanding, as wanting all those senses which furnish the human mind with ideas.”

Surely it cannot be denied that education has done something for mankind since this doctrine was sent forth as a great principle of law.

One of the points of greatest importance which an educational survey of Europe suggests is this:—

WHAT ARE THE CONSEQUENCES TO A PEOPLE OF HAVING A  
UNIVERSAL OR ONLY A PARTIAL SYSTEM OF EDUCATION?

All institutions in the old countries (as they are sometimes called) have arrived at a greater degree of maturity than with us. What is good has had time and opportunity to work out a more full development of its benign effects; and what is evil, to inflict upon mankind a fuller measure of calamity. It is so, emphatically, in regard to education. We have the seeds of



the same evils and of the same benefits which there have germinated and been matured, and are now bearing luxuriant harvests of misery or of blessings. We shall do well, then, to look to their course, both for things to copy and things to avoid ; because reason cannot predict any thing so certainly from its apparent natural tendencies as experience demonstrates it in its practical results.

Where government has not established any system of education, the whole subject, of course, is left to individual enterprise. In such cases, a few men, — always a small minority, — who appreciate the value of knowledge, will establish schools suited to their own wants. The majority will be left without any adequate means of instruction, and hence the mass will grow up in ignorance. Here the foundation of the greatest social inequalities is laid. Wherever this social inequality is once established, its tendency is to go on increasing and redoubling from generation to generation. And this is but a part of the evil. Suppose after the existence, though only for a short period, of such a state of things, some more philanthropic or more statesman-like class of the community attempts to substitute a universal for the partial system. Their wise and benevolent project immediately encounters the opposition of those who are already provided for. Why should we, say the latter, after having incurred trouble and expense in erecting schools suited to our wants, not only abandon them, but incur new trouble and expense in erecting schools for you. Your plan is untried, and we may well entertain doubts of its success. Besides, our children have already derived from our schools some cultivation of mind and some refinement of manners ; and, even if you were to have schools, we could not allow our children to associate with yours. Our teachers, too, have been selected in reference to our own views in government and religion ; and, before we unite with you in regard to literary and moral education, we must know whether you will unite with us in regard to political and religious. Thus the better educated classes of the community, who ought to be the promoters of knowledge

and refinement among their inferiors, stand as a barrier against improvements.

The private teachers form another obstacle. In such a state of things as I have supposed, they stand towards each other in the relation of competitors; but their interest prompts them to unite against the introduction of a new class of schools, which would diminish the patronage bestowed upon their own. When the "Central Society of Education," in England, were lately prosecuting their inquiries in relation to the relative number of children in school and out of school in different towns, they were obliged to proceed with the greatest caution, lest they should alarm the fears of the private teachers, and obtain either no answers or false answers to their questions; and, in some instances, the teachers combined, and sent on forged lists of schools and scholars, in order to diminish the force of the argument for a national system, by showing that schools enough already existed. This fact was communicated to me by a gentleman engaged in the inquiry.

Another evil is that the partial system, or rather the absence of system, so far from being attended with less expense than the universal, is always attended with greater. This is true in regard to the expense of schoolhouses as well as of tuition. In England, where there is no national system, I saw many schoolhouses, — in Birmingham, Bristol, Liverpool, and elsewhere, — not capable of accommodating more than from one hundred to four or at most five hundred pupils, which cost from one hundred thousand to three or four hundred thousand dollars apiece. One edifice for a private school, such as I have seen in England, — not capable of containing more than five hundred scholars, — cost as much as twenty of the plain and substantial grammar-school houses in Boston, each one of which will contain that number. Such is the natural difference of acting from a set of ideas or a frame of mind which embraces the whole people, or only a part of them, in its plans for improvement, — of acting from aristocratical or from republican principles. If the schoolhouses which I saw in the most

wealthy and populous cities of Prussia are a fair specimen of those in the rest of the kingdom, it would not take more than a hundred of such as I saw in England to equal the expense of all in the whole kingdom of Prussia, where the children of fourteen millions of people are almost universally in attendance.

Arrange the most highly civilized and conspicuous nations of Europe in their due order of precedence, as it regards the education of their people, and the kingdoms of Prussia and Saxony, together with several of the western and south-western states of the Germanic Confederation, would undoubtedly stand pre-eminent, both in regard to the quantity and the quality of instruction. After these should come Holland and Scotland; the provision for education in the former being much the most extensive, while in the latter, perhaps, it is a little more thorough. Ireland, too, has now a national system which is rapidly extending, and has already accomplished a vast amount of good. The same may be said of France. Its system for national education has now been in operation for about ten years: it has done much, and promises much more. During the very last year, Belgium has established such a system; and before the revolution of 1830, while it was united with Holland, it enjoyed that of the latter country. England is the only one among the nations of Europe, conspicuous for its civilization and resources, which has not, and never has had, any system for the education of its people. And it is the country where, incomparably beyond any other, the greatest and most appalling social contrasts exist; where, in comparison with the intelligence, wealth, and refinement of what are called the higher classes, there is the most ignorance, poverty, and crime among the lower. And yet in no country in the world have there been men who have formed nobler conceptions of the power and elevation and blessedness that come in the train of mental cultivation; and in no country have there been bequests, donations, and funds so numerous and munificent as in England. Still, owing to the inherent vice and selfishness of

their system, or their no system, there is no country in which so little is effected, compared with their expenditure of means ; and what is done only tends to separate the different classes of society more and more widely from each other.

The statement of a few facts will show the amount expended, the inequality of the expenditure, and the comparatively little benefit derived therefrom.

A few years ago, a parliamentary commission was instituted to inquire into the amount and state of public charities in England and Wales. The commission sat for a long time, and made most voluminous reports, the mere digest or index of which fills two thousand three hundred and forty-one printed folio pages. From these I select the following facts : —

The annual income of the charity funds for schools is set down in these reports at £312,545 ; but some schools very richly endowed were not included in the investigation : and, in conversation with several most intelligent men, — members of parliament, and others, — I found their opinions to be, that, as the respective amounts of the charity funds were rendered by persons who had an interest in undervaluing them, the above aggregate was doubtless much below their real value ; and that probably £500,000 would be a moderate estimate of their total annual income. This is equivalent to almost two million five hundred thousand dollars of our money. It is easy to see, that if this sum were consolidated, and then distributed on principles of equality, it would be productive of incomputable good. Yet in a country where such splendid endowments for the cause of education have been made, and their income is now annually disbursed, there are, according to the estimate of a late British writer, *more than a million and a half* of children, of a suitable age to attend school, who “are left in a condition of complete ignorance.”

The following are instances of the present mode of distributing the income of the above-mentioned funds, the county and the town being given where the school exists which is supported by the fund named : —

At Dunstable, county of Bedford, £330 10s. annual income (a pound is equivalent to almost five dollars of our money) supports forty boys.

At Bedford, same county, a school with £90 income teaches four hundred and twenty children.

County of Berkshire, town of Reading, £1,043 15s. 9d. teaches twenty-two boys.

At Tilehurst, same county, £16 10s. 6d. teaches one hundred children.

County of Cambridge, town of Bassingbourne, £7 6s. 4d. teaches one hundred and sixty children; while in Ely, same county, £231 1s. teaches twenty-four only.

County of Cornwall, town of St. Stephen's, £192 13s. 4d. teaches six boys; and in the town of St. Bunyan, same county, £8 8s. teaches one hundred and fifty children.

County of Devonshire, town of Plymouth, £596 12s. 3d. teaches seventeen boys; while in Brixham, same county, £78 teaches two hundred children.

County of Hertfordshire, town of Berkhamstead, £269 teaches thirty children; while in Therfield, same county, £2 teaches forty.

County of Kent, town of Greenwich, £625 14s. 4d. teaches twenty boys; while in Sundridge, same county, £10 teaches seventy children.

County of Lancashire, town of Manchester, £2,608 3s. 11d. teaches eighty; while in Bibchester, same county, £20 teaches one hundred.

There is a single class of schools in England, — those founded for giving instruction in the Latin and Greek languages, — sixty-five of which have an income not exceeding £20, and fifteen have an income of more than £1,000. Several of this class have an income of four, five, or more thousand pounds per annum.

But this is enough to show how unequally the means of education are distributed in England, even where they are enjoyed at all, and how difficult it must be to introduce a general

system for the whole people, when many or most of the leading families already have schools of their own. Such, too, is the natural consequence of having no national system, — one in which the whole people can participate. These facts are full of admonition to us; for this is the state of things towards which, eight years ago, we were rapidly tending.\*

\* A few extracts from documents authenticated by the government itself will serve still further to show the inequality of the means of education which exists in England.

One of the late parliamentary committees on education describes the condition of a schoolroom in the following words: —

"In a garret, up three pair of dark, broken stairs, was a common day-school, with *forty* children, in a compass of ten feet by nine. On a perch, forming a triangle with a corner of the room, sat a cock and two hens; under a stumped bed, immediately beneath, was a dog-kennel, in the occupation of three black terriers, whose barking, added to the noise of the children and the cackling of the fowls on the approach of a stranger, was almost deafening. There was only one small window, at which sat the master, obstructing three-fourths of the light. There are several schools in the same neighborhood which are in the same condition, filthy in the extreme."

In the same town, I saw a schoolhouse erected for the wealthier classes, which cost more than four hundred thousand dollars!

In the same report, it is said that "one master, being asked if he taught morals, answered, "That question does not belong to my school: it belongs more to girls' schools."

Another master, who stated that he used the globes, was asked if he had both, or one only. "Both," was the reply: "how could I teach geography with one?" It appeared that he thought both necessary, because one represented one half, and the other the remaining half, of the world. "He turned me out of school," says the agent, "when I explained to him his error."

It is thought unlucky for teachers to count their scholars. "It would," said a mistress, "be a flat flying in the face of Providence. No, no: you sha'n't catch me counting; see what a pretty mess David made of it when he counted the children of Israel!"

The Rev. Edward Field, inspector of national schools, in his report (1840), after speaking in commendation of certain schools, adds, "This guarded and qualified praise I am unable to extend to the teachers of dame schools. Too often, the rule of such schools, when any profitable instruction is given, is a harsh one; and, in others, the honest declaration of one dame would apply to many, — 'It is but little they pays me, and it is but little I teaches them.'"

Some of the accounts trace this ignorance, as a cause, to its legitimate effects.

"In the locality where, in the year 1838, the fanatic who called himself Sir William Courtenny raised a tumult which ended in the loss of his own life and the life of several of his deluded followers, out of forty-five children above fourteen, only eleven were, on investigation, found able to read and write; and, out of one hundred and seventeen under fourteen, but forty-two attended school, and several of these only occasionally. Out of these forty-two, only six could read and write."

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A fact closely connected with the preceding is an enormous disproportion in the salaries of teachers; these salaries de-

In February, 1840, Mr. Seymour Tremenhcre, assistant poor-law commissioner, reported on the state of education in that part of Wales in which the Chartists, under Frost, made a sudden rising. From this report, it appears that in five parishes, having an aggregate population of 85,000, there were but 80 schools, and only 3,303 children in attendance.

The following are extracts from a late report of the National (Church) School Society:—

"There is only one small school for the daily education of the poor in the whole parish, containing about 12,000 inhabitants; that school educates about 100. As one result of this neglect, the parish became last year the focus of Chartism; and the most bitter spirit of disaffection still exists among the lower classes."

"The population of the village of which I am the incumbent is not less than 20,000; there is no free school in the whole place; hundreds of children receive no education whatever."

"I am vicar of a parish which contains a population of 10,000 souls; and I grieve to say there is but one schoolroom in it."

"Our situation is briefly as follows: The parish contains 1,500 souls; there is nothing which can with propriety be called a school. The demoralization and extreme ignorance which prevail among this mass of human beings are truly deplorable. No language of mine can convey any idea of its extent."

"I find a population of 10,000 souls committed to my charge, with only one church, and a still smaller school in connection with the church."

"The population of the township is about 15,000; we have no definite school; we rent two small places, which swallows up the subscriptions."

"The district belonging to my church contains a population of 5,000; and I regret to say that the children are in a state of darkness and ignorance beyond description."

"This parish is without a building of any kind wherein to assemble the children, either for a Sunday or a week school."

"I am the curate of a poor parish with 3,000 of population; and there is no schoolhouse of any kind."

"This district has a population of 8,000. The only instruction which the children receive is given to about 100 for an hour or two on the Sunday."

Such quotations as the above might be almost indefinitely extended.

The Manchester Statistical Society, in their report on the state of education in York, remark, that "however imperfect the education received at Sunday schools may be, when compared with a reasonable or a foreign standard, it affords, nevertheless, the most valuable training within the reach of the great mass of the industrious population of England."

Upon this, an able writer, of the "Society for the Diffusion of Useful Knowledge," remarks, "Yet this training extends only to a few hours every week; is given by persons who are generally elevated only a little above their scholars, and whose only valuable recommendation is, that they are, in general, animated by a benevolent and pious spirit. There are, however, indirect effects which abate the good of Sunday schools, particularly in the spirit of sectarianism and bigotry, which, as at present constituted, they tend to foster; the undue opinion of themselves which they are apt to engender in the minds of the teachers; the rivalry which they excite and the jealousies which they keep

pending rather upon the endowment of the school than upon the qualifications of the teacher. I have seen a teacher who

up between different schools; and, above all, the pauperizing influence, which, more than other charity-schools, they exert on the scholars. So long, indeed, as scarcely any other book than the Bible is employed in Sunday schools, the training which they afford must be very defective, unapproached in its excellence as is that holy book when well understood and rightly used. But an exclusive acquaintance with it is not sufficient to expand the mind, and prepare it for the duties of life. Without the aid of other knowledge, it is not possible that those distinctions and qualifications should be made which parts at least of the Sacred Scriptures require, and which are rendered necessary by the lapse of ages and by the existence of a totally different order of circumstances. If these distinctions and qualifications are not made, the most erroneous conclusions may be drawn from the Bible, and the most unrighteous purposes may be in appearance made to receive a sanction from it. The Scottish Covenanters justified their murders by appealing to the severities practised by the Israelites. The German Anabaptists made use of the disinterestedness of the first Christians in sharing their property with the destitute in an emergency, in order to authorize their spoliation of the goods of others. The madman Thom appealed to the Bible in support of his delusions. Chartism flourished most vigorously, and in its most offensive form, in cases where the Scriptures were the text-book."

The civil commotion which has prevailed, during the greater part of the last year, over a considerable portion of Wales, affords a fresh instance of the perversion of the Bible in the hands of ignorance. Large bodies of the farmers of Wales, feeling themselves aggrieved by the number of turnpike-gates, and the high rates of toll exacted for passing through them, combined together, and commenced the work of midnight demolition. In the prosecution of their enterprise, several lives have been lost, and a vast amount of property destroyed. A military force has been marched into the country to put down the disturbances; and a judicial commission, raised to try the offenders, is now sitting. These violators of the law, and depredators upon private property, profess to be very religious. They derive their name, and justify their outrages, from Scripture. They call themselves "*Rebeccaites*," or "*Rebecca and her Daughters*;" and they quote the following text as a sanction of their proceedings: "And they blessed Rebecca, and said unto her, Thou art our sister: be thou the mother of thousands of millions, and let thy seed possess the *gate* of those which hate them."—Gen. xxiv. 61. According to their interpretation of this passage, they are the seed of Rebecca, and the owners of turnpike stock are "those which hate them;" whose "*GATES*," therefore, they are commanded to "possess,"—that is, to *destroy*.

The following extract is from "The Thirty-fifth Report of the British and Foreign School Society:"—

"In the house of correction at Lewes, of 846 prisoners, 48 only could read and write well; 252 could read and write a little; only 8 had any idea of Christian doctrine; 394 knew nothing of our Saviour; 490 had heard of him, but knew little more than his name; 54 knew something of his history."

Such, in the end, are the inevitable consequences when the rich neglect the poor; the educated, the ignorant.

The history of the world is rife with proofs of the evils of ignorance; but the present condition of England demonstrates that ignorance becomes more and

received from eight to ten thousand dollars a year, by the side of one, apparently his equal, who had not half as many hundreds.

There is another and a most formidable evil resulting from the absence of a national system, and of that supervision of the schools which a national system imports. I refer to the character of the text-books for schools, which infamous compilers and infamous teachers conspire to introduce into them as one of the attractions for degraded children. Bad men, in any walk of life, always look to the market which they can supply, and not to the quality of the productions they offer for sale. When the education of a portion of the people is very high, while that of another portion is very low, some of the books prepared for the schools will be very good, while it is quite as certain that others will be as bad as human iniquity can make them. In some of the book-shops in England, I saw text-books for schools, on no single page of which should a child ever be allowed to look, — books for the young, filled with vile caricatures and low ribaldry, at once degrading to the taste, and fatal to the moral sensibilities.

Before the establishment of the present National Board of Education for Ireland, the same evils existed there. In one of the reports of the commissioners for inquiring into the state of the Irish schools, they say, "We have already adverted to the deplorable want of such qualification in a great majority of those who now teach in the common schools, and to the pernicious consequences arising from it. Their ignorance, we have reason to believe, is not seldom their least disqualification ; *and the want of proper books often combines with their own opinions and propensities in introducing into their schools such as are of the worst tendency.*" Again : speaking of the advantages to be derived from the establishment of a Board of Education who should exercise a supervisory power over the books

more dangerous just in proportion to the freedom of the institutions amongst which it is allowed to exist. Shall we take warning from these examples, or are we of those "who will not be persuaded though one should rise from the dead" ?

to be used, they say, "From the execution of this part of the plan, we anticipate advantages of the utmost importance to the whole country, inasmuch as we cannot doubt that the books thus prepared will, by degrees, be universally adopted in every school, whether public or private; and, while education is thus facilitated by a uniform system of instruction, the evils arising from the want of proper books adapted to the inferior schools will be removed, *and the children be no longer exposed to the corruption of morals and perversion of principles too often arising from the books actually in use.*"

Such are some of the mature, full-grown calamities which result from the neglect of a state or nation to establish a general system of education for its people, and from leaving this most important of all the functions of a government to chance and to the speculations of irresponsible men.

We can never fully estimate the debt of gratitude we owe to our ancestors for establishing our system of common schools. In consequence of their wisdom and foresight, we have all grown up in the midst of these institutions; and we have been conformed to them in all our habits and associations from our earliest childhood. A feeling of strangeness, of the loss of something customary and valuable, would come over us, were they to be taken away or abolished. How different it would be if these institutions were strangers to us! if, every time we were called to do any thing in their behalf, we should violate a habit of thought and action instead of fulfilling one! how different, if every appropriation for their support were a new burden! if every meeting for their administration were an unaccustomed tax upon our time, and we were obliged to await the slow progress of an idea in the common mind for the adoption of any improvement! Emphatically how different, if the wealthy and leading men of the community had gathered themselves into sects and cabals, each one with his hand against all the rest, unless when they should temporarily unite to resist the establishment of a system for the equal benefit of all! It is in consequence of what was done for us two hundred years

ago that we are now carrying on a work with comparative ease, which in many of our sister States, as well as in some foreign countries, must be accomplished, if accomplished at all, with great labor and difficulty. Can there be a man amongst us so recreant to duty, that he does not think it incumbent upon him to transmit that system, in an improved condition, to posterity, which his ancestors originated for him?

Let any one examine those voluminous reports of the evidence, taken before parliamentary commissioners in England, on the subject of education, and he will be astonished to find men of the highest capacities, and of the most extensive attainments on other subjects, faltering and doubting on the easiest points of this, and groping their way after plans and arrangements, which here have not only been long reduced to practice, but are familiar to the whole body of the people.

#### SCHOOLHOUSES.

With the exception of the magnificent private establishments in England and France, I have seen scarcely a schoolhouse in Europe worthy to be compared even with the second-rate class of our own. And even those princely edifices were far inferior to ours in their fittings-up and their internal arrangements. In Scotland, and in some parts of England, the schools for the poorer classes were crowded to a degree of which we have never seen an example, and of which we can hardly form a conception. I have seen more than four hundred children in two rooms, only thirty feet by twenty each; and in Lancasterian schools, a thousand children in a single room. In Prussia, and in the other states of Germany which I visited, the schoolhouses were of a very humble character. I should here make one exception in favor of Leipsic, in the kingdom of Saxony, which, in addition to having one of the best systems of education, if not the very best, to be found in any city of Germany, has also excellent schoolhouses; and the one last erected as a charity-school for poor children is the best of these.

One most valuable feature, however, belongs to all school-houses of the larger kind. They are uniformly divided into class-rooms, and an entire room is appropriated to each class ; so that there is no interruption of one class by another. But the rooms themselves are small in every dimension, excepting the distance between the scholars' seats and the floor. In this respect, they resemble those formerly built among ourselves. I saw scarcely one where the children, while seated at their desks, could touch the floor with their feet. In regard to their present and our old ones, it may be said, that if one of these low-studded rooms, with its enormously high seats, should by any chance be preserved for a thousand years, and should then be revealed to posterity as the ruins of Pompeii and Herculaneum have been to us, the antiquarians of that remote day would be likely to infer, from an inspection of the low ceiling and the great distance between the seats and the floor, that the children of their ancestors were a race of monsters, — giants at one end, and pygmies at the other.

Nor did I see a single public school in all Germany, in which each scholar, or each two scholars, had a desk to themselves. A few private schools only had adopted this great improvement. Backs to the seats, too, were almost as rare as single desks. The universal plan, whether for schools, gymnasia, or colleges, is to have one long bench, or form, on which ten or a dozen pupils can sit, with a table or desk before it of equal length, to be used in common by the occupiers of the seats. Each room has an aisle, or vacant space, along the wall on one side, and sometimes on both.

One striking peculiarity of almost all Prussian and Saxon schoolhouses is, that they contain apartments for the residence of the teacher and his family.

In many places in Holland, I found that arrangements had been made, on scientific principles, for warming and ventilating the schoolrooms ; but in Germany never. In the schools of the latter country, whether high or low, there was an astonishing degree of ignorance or inattention to the laws of health

and life, so far as they depend upon breathing pure air. The atmosphere of the rooms was often intolerable. In the hottest summer-days, only one window of a room full of children would be open ; and, when the door was opened for their egress or ingress, the window was closed. The stoves by which the rooms are warmed in winter resemble very much, in the principles of their construction, those which we call "air-tight ;" and they are often so placed as to be fed at a door outside of the room, so as to prevent even that slight change of air which is caused when that in the room is used to sustain the combustion of the fuel. To my very frequent question, in what manner the rooms were ventilated, the universal reply was, "By opening a door or window,"—a very insufficient theory, and one which, I fear, poor as it is, is seldom reduced to practice. When I surveyed the condition of things in Massachusetts, preparatory to making that part of my last report which relates to human physiology, I almost came to the conclusion that there could be no part of the civilized world where less attention was paid to the laws of health and life than among ourselves. My present opinion is, that, ignorant and inattentive as we are, there is no part of the world that is not as much or even more so. What benefits, then, must flow to mankind from a universal knowledge and practice of the principles of the beautiful and noble science of physiology !

Were one to attempt a philosophical explanation of that lethargy of character, that want of activity and enterprise, for which the Germans are so proverbial, I think he would fail of a just solution of the problem if he left out of the account the errors of their physical training. I visited a very great number of hospitals for poor children, orphans, &c., some of which were very extensive, containing a thousand children. The dormitories of all were large, common, generally unventilated rooms, with beds placed side by side, and as near each other as they could be conveniently arranged. I have often seen from a hundred to a hundred and fifty beds in the same apartment. But the bedding was the most extraordinary.

Though in the middle of summer, each child was supplied with two feather-beds; one for himself to lie on, the other to lie on him. The usual outfit which I saw in the hospitals and other places for children was one sheet and two feather-beds for each child; and these feather-beds would weigh from ten to twenty pounds each. Where the principal or assistant teacher of the school slept in the same room, the bed allotted to him had an increased weight of feathers, corresponding to the received ideas of his rank and dignity. In some instances, the enormous feather-beds under which the inhabitants sleep weigh forty or more pounds. In many of the best hotels in the first cities of Germany, such a thing as a woollen blanket is not to be found. Occasionally I found these in prisons; for it seems to be considered as a part of the punishment of a malefactor to be debarred from sleeping under a feather-bed. Such is the universal custom of the country. Every respectable man and child sleeps between two feather-beds, summer and winter. The debilitating effect of such a practice both upon body and mind must be incalculable. If the leading members of the Holy Alliance wish to abase their subjects into a voluntary submission to arbitrary power, if they design so to enervate their spirits that they will never pant for the joys and the immunities of liberty, and so to impair their vigor of body that they will have no energy to achieve it, they can do no one thing more conducive to these ends than to perpetuate this national custom of low ventilation and sleeping between feather-beds.\*

\* The only public edifice I saw in Europe which enjoys a perfect *luxury* of ventilation was the British House of Parliament. The arrangements for this object were conceived by that celebrated chemist, Dr. Reid, and executed under his superintendence. The plan is scientific, and the apparatus for executing it complete.

In the external wall of the House of Commons, a great number of orifices open into the out-door air; every alternate brick for a space of perhaps twenty feet square being removed from the wall. Through these orifices, the *crude air* or *unmanufactured article* is admitted. Stretched from above the upper line of these orifices, that is, from the ceiling of the room, into which they open inwardly, and reaching to the floor at an angle of 45°, is a sheet or screen of coarse cloth, through which all the air received is strained or sifted. By this means, all particles of coal-



## READING-BOOKS.

I have made it a point to look particularly into the reading-books used in schools. Wherever I have been, I have observed

smoke, soot, or other impurity, held in mechanical solution with the atmosphere, are intercepted, and only pure external air is allowed to enter. Having passed through this sieve, or strainer, the air may now be conducted from this apartment in either one of two directions, as it requires or does not require to be warmed. If it requires to be warmed, it passes through a room filled with a great number of heated iron pipes, which raise it to the desired temperature. Another passage-way is provided when it does not require to be warmed; and, by opening different doors, it is directed into one or the other of these at pleasure. Here, too, it is further purified from any admixture of foul gases by exposure to the action of chloride of lime; and, on great occasions, it is scented with cologne-water or other perfume. Further on, it passes through a third apartment, which is the identical place where Guy Fawkes was said to have hidden his gunpowder to blow up the British Parliament in 1605. In this room is a system of iron conduits, or water-pipes, lying upon the floor, and crossing each other after the manner of network, or meshes. At brief intervals along the whole course of these pipes are little perforated caps, like the top of a pepper-box. These pipes are filled with water, under a heavy pressure. On the turning of a grand cock, this water is driven out through the minute orifices above mentioned in beautiful, fine jets, which, striking the upper ceiling of the apartment, rebound and fall back to the floor in the finest drops. During hot days, this apparatus is kept playing all the time while the Houses are in session, thereby imparting a delicious coolness and freshness to the air before it enters the halls. In addition to these jets of water, designed to cool and freshen the air, bags of ice are suspended in this apartment, the melting of which, by absorbing the caloric of the atmosphere, acts as a refrigerator. The air, being now cleansed, purified, warmed, cooled, or scented, is prepared to enter the hall of the House. For this purpose it is carried beneath the whole extent of the floor. This floor is perforated throughout with small holes a little larger than a pipe-stem or goose-quill; and through these the air is filtrated, so to speak, into the room above. But, to prevent any current perceptible to the feet or limbs, the floor of the House is covered with a hair carpet, so that the air may rise imperceptibly through its meshes. Similar provision is also made for carrying a full supply of fresh air into the galleries, so that they are not dependent upon that which has ascended from the breathers below. The upper or over-head ceiling of the House is not tight, although, to one looking at it from below, it exhibits no opening. Through this ceiling, the foul air is carried off into the attic, though this foul air is far purer than that which common Londoners breathe; for it is thrown in in such quantities that only a very small portion of it reaches any human lungs. Funnel-are also placed over the great gas-burners by which the House is lighted, and the current of air which rushes up through these is very rapid.

The arrangements for ventilating the House of Lords are almost precisely similar to those for the House of Commons, which I have described. When the foul or used-up air from both Houses has reached the attic, the currents are conducted into a common passage, or channel. Through this channel the air is now carried down to the level of the earth. Here it enters the lower end of a vast cylindrical brick tower, eighty feet in height. The diameter of the tower is perhaps fifteen or twenty feet at the bottom; but it tapers gradually to the top, so that it exhibits the

a marked distinction between the foreign and our own, as it regards the character of the selections of which they are com-

appearance of a truncated cone. About ten feet from the bottom, a grating of iron bars is laid across the interior of the tower, and on these a coal-fire is kept burning. Thus the tower acts as a chimney. The air, rarefied by the fire, rapidly ascends, creating a vacuum below, which causes the air from the attics of the two Houses to rush in, and then the pressure of the external air through the orifices first described keeps up the current through its whole course.

One or two men are constantly employed in superintending this apparatus, directing the currents of air, so that they may be admitted at the proper temperature, purified, cooled by the fountains, or warmed by the pipes, as the varying days or seasons of the year may require. Beneath the Houses, at places where the pressure or crowd on great state occasions is likely to be most dense, large fans are provided, which, being rapidly revolved, force up through the orifices in the floor a much greater quantity of air than would ascend from the natural effect of a mere difference of temperature.

It is now between six and seven years that an *hourly register* has been kept of the state of the thermometer and barometer, as they are affected by the air that enters the Houses. The velocity and volume of the air is also noted; all the great passages being so contrived, that they can be more or less opened and closed at pleasure. From the "woolsack," or speaker's chair, in the House of Lords, a vertical tube descends to the basement below. At the upper end of this tube, a thermometer is suspended for inspection by the members. The attendant in the basement, by means of a cord and pulley, can let down this thermometer at any moment, mark its condition in his register, and immediately replace it without its being missed in the hall above.

In summer, the members are not only cooled by the water and the ice in the rooms below, but also by the velocity of the current of air; that is, a current of air, at the temperature of 66°, may be so increased in velocity as to produce sensations of coolness as great as another less rapid current would do at the temperature of 60°. Sometimes a hundred and twenty cubic feet a minute are supplied to each pair of lungs.

All these circumstances are noted, from hour to hour, by clerks and superintendents; but it is left for the profound and scientific mind of Dr. Reid to strike the equations and evolve the grand results. That gentleman assured me, that, since the adoption of this system, hardly a cough had been heard in either House (excepting, I presume, all coughs prepense, for the suppression of speeches).

All the offices, committee-rooms, &c., belonging to the Houses, are ventilated substantially in the same way.

The provisions for warming and ventilating the new Houses of Parliament are on a still grander scale. The entire edifice, including the halls for the two Houses, offices, committee-rooms, &c., is 900 feet long; and, on the grand or principal floor, there are between two and three hundred rooms. At one end of the building is to be the clock tower, at the other end the Victoria tower. From the summit of these towers, as high above earthly impurities and miasms as is practicable, the air is to be taken. It is to pass down these towers—more or less down one or the other according to the course and strength of the wind—to the basement of the structure. Here it is to be turned and conducted, in a horizontal direction, to a spacious reservoir in the centre. While moving towards this cen-

posed. A great proportion of the pieces which make up our compilations consist of oratorical, sentimental, or poetical pieces. The foreign reading-books, on the other hand, partake more largely of the practical or didactic. Ours savor more of literature or belles-lettres ; theirs, of science and the useful arts.

Perhaps the best mode of giving a definite idea of the character of the foreign reading-books would be to quote a specification of subjects from the table of contents of some specimen-book.

The following is from the table of contents of a German "First Reading Book, for the lowest classes in elementary schools : " —

"1st PART. LESSON 1, The parental home ; 2, Building materials, stone, lime, wood ; 3, Construction, iron and glass ; 4, The four elements ; 5, Comparison of building materials ; 6, The inner parts of houses ; 7, House utensils and tools ; 8, Clothing ; 9, Food ; 10, Inhabitants of houses ; 11, Household animals and their uses ; 12, Continuation, — the winged tribe ; 13, Injurious animals in the house ; 14, Conduct towards beasts ; 15, Language, advantage of man over beasts.

"2d PART. QUALITIES OF THINGS. LESSON 1, Colors ; 2, Forms ; 3, Qualities which a house may have ; 4, Qualities of some building materials ; 5, Qualities which an apartment may have ; 6, Qualities which tools may have ; 7, Qualities which a road may have ; 8, Qualities which water may have ; 9, Qualities which food may have ; 10, Qualities which articles of clothing may have ; 11, Qualities which an animal may have, — bodily qualities ; 12, What one learns from the actions of beasts ; 13, Qualities which a man may have, — bodily qualities of a man ; 14, Continuation, — moral qualities ; 15, Qualities which man must not have."

*A selection from the residue of the lessons follows : —*

"Lesson 17, Sounds and tones of beasts ; 19, Sounds of inanimate things ; 20, Properties and actions of plants and animals ; 21, Actions in school ; 23, Household arrangements ; 25, Country occupations ; 26, Conduct of children towards others ; 41, Adding to the name of a thing a word of quality.

tral point, it can be turned into any one of a number of channels, and receive such changes — warming, refrigeration, perfuming, medication, &c. — as may be desired. From this great heart, it is to be driven in all directions towards every part of the vast edifice ; and, by a system of doors and valves, to be let into or shut off from any apartment of the many-mansioned building at pleasure.

"3d PART. MORAL INSTRUCTION. LESSON 2, Order in families; 3, Duties of parents," &c., &c.

Then follow "stories for exciting and cultivating moral ideas and sentiments;" and the book closes with songs and prayers "for the awakening and animating of religious feeling."

The following titles are from "A Course of Elementary Reading" by J. M. McCulloch, D.D. Eleventh edition, Edinburgh, 1842:—

"1. PHYSICAL SCIENCE. On the pleasures of science; General properties of bodies, — Impenetrability, Extension, Figure, Divisibility, Inertia; Attraction of Cohesion; Attraction of Gravity; First lines of Mechanics; Motion; Momentum; Centre of Gravity; The Mechanical Powers; Pressure of Watery Fluids; Capillary Attraction; The Winds; Aqueous Vapor; Clouds and Mists, Rain, Dew, Snow, Hail; Powers of Vision; The Quantity of Matter in the Universe.

"2. CHEMICAL SCIENCE. Properties of Free Caloric; Radiation; Conductors; Chemical Attraction; Simple Bodies; Oxygen, Hydrogen, Nitrogen, Carbon, Sulphur, Phosphorus; The Metals; Compound Bodies, — Atmospheric Air; Water; Effects of Caloric, &c., &c.

"3. NATURAL HISTORY. The Three Kingdoms of Nature. Minerals: Diamond, Flint, Asbestos, Clay, Slate, &c., &c. The Malleable Metals: Platina, Gold, Mercury, Silver, Copper, Iron, &c., &c. Clothing from Animals: Fur, Wool, Silk, Leather. Vegetable Physiology: Motion of the Sap, Leaves, The Seed, Germination, &c. Circulation of the Blood. Vegetable Clothing: Flax, Hemp, Cotton. The Animal Economy," &c., &c.

The Fourth Part of this work consists of pieces classed under the head of "Geography and Topography;" then follow Religious, Moral, and Miscellaneous pieces, in prose and poetry, which complete the book.

There are hundreds, and perhaps thousands, of reading-books in the different languages abroad. I have selected the above as a fair specimen of what I saw; and I believe most educators will agree with me in thinking them far better suited to the tastes and capacities of the young than most of our own.

#### APPARATUS, ETC.

I have seen but little of school apparatus abroad which is not to be found in good schools at home. The blackboard is

a universal appendage to the schoolroom, and is much more used than with us. Indeed, in no state or country have I ever seen a good school without a blackboard, nor a successful teacher who did not use it frequently.

Generally speaking, the *infant* schools of England and Scotland are admirably supplied with abundant and appropriate apparatus. The schoolrooms are literally lined with cards from which to teach the alphabet, with short sentences in English, and a few texts of Scripture or moral maxims. Delineations of various plants, trees, animals, — beasts, birds, fishes; of different races of men, with their varieties of physiognomy and costume; of portraits of kings, queens, and distinguished personages; a compass, a clock-face, &c., — are profusely provided.

In Holland, I saw what I have never seen elsewhere, but that which ought to be in every school, — the actual weights and measures of the country. These were used, not only as a means of conveying useful knowledge, but of mental exercise and cultivation.

There were seven different liquid measures, graduated according to the standard measures of the kingdom. The teacher took one in his hand, held it up before the class, and displayed it in all its dimensions. Sometimes he would allow it to be passed along by the members of the class, that each one might have an opportunity to handle it and to form an idea of its capacity. Then he would take another, and either tell the class how many measures of one kind would be equivalent to one measure of the other; or, if he thought them prepared for the questions, he would obtain their judgment upon the relative capacity of the respective measures. In this way he would go through with the whole series, referring from one to another, until all had been examined and their relative capacities understood. Then followed arithmetical questions founded upon the facts they had learned; such as, if one measure-full of wine costs so much, what would another measure-full cost (designating the measure), or four, or seven other measures-full. The same thing was then done with the weights.

It is easy to see how much more exact and permanent would be the pupil's knowledge of all weights and measures, obtained in this way, than if learned by heart from the dry tables in a book ; and also how many useful and interesting exercises could be founded upon them by a skilful teacher. I believe it would be difficult to find many men in the community, of middle age, who can now repeat all those tables of weights and measures, which, as school-boys, they could rehearse so volubly ; or who, were they now to see actual sets of weights and measures, could call all the different ones by their true names, or could distinguish each denomination from the others if not seen in juxtaposition with them. Having learned the tables by rote, the words have long ago vanished from the mind, and the ideas never were in it.

Something of the same kind should be done also in our schools in reference to numbers. Children learn the numeration-table without any adequate notion of the rapid increase of the successive denominations, or how vast the numbers are which they rattle off with such volubility. I have often tested the knowledge of the older classes in our schools, as to their comprehension of large numbers, by asking them this question : If a man were to count one each second for ten hours in a day, how many days would it take him to count a million ? And, in the same class, the answers have frequently varied from one day to thirty ; and this when each one of the scholars could work any sum in the arithmetic. They had never learnt, by actual counting, the ratio of decimal increase ; and nothing but practice will ever give an idea of it. Dr. Howe, of the Blind Institution at South Boston, says he considers " a peck of beans or corn an indispensable part of the apparatus of his school." If a boy says he has seen ten thousand horses, make him count ten thousand kernels of corn, and he never will see so many horses again.

In the public schools of Holland, too, large sheets or cards were hung upon the walls of the room, containing *fac-similes* of the inscription and relief — face and reverse — of all the cur-

rent coins of the kingdom. The representation of the gold coins were yellow; of the silver, white; and of the copper, copper-color.

In the schools both of Holland and Germany, I occasionally saw printed sheets suspended from the walls of the schoolroom, containing practical advice and directions respecting important emergencies or duties of life; such as the best mode of proceeding to resuscitate a drowned person, of curing a burn, of stanching a ruptured blood-vessel, &c., &c.

In all the class-rooms for little children in Germany were reading-frames or reading-boards for elementary instruction in language. These consist of parallel and horizontal laths, or bars (called in America slats, in England sloats), with grooves, into which small squares of pasteboard or blocks of wood, having letters printed upon them, could be inserted. The manner in which these are used will be described hereafter, under the head of "Reading."

In the schools for the deaf and dumb, I saw admirable collections of natural objects for the use of the pupils. These were not merely an assortment of shells and minerals, which generally fills up our conceptions of cabinets of this kind, but assemblages of different seeds of plants, particularly all those used for food or in the arts, of dried plants, &c., &c., arranged neatly in boxes, so that they could easily be handled without loss or injury. I found similar collections in other schools, but not on so large a scale; for it is peculiarly necessary that the deaf and dumb should *see* the objects of their lessons. These they are made to describe in spoken as well as in written words, and to connect their history with geographical knowledge.

In the deaf and dumb school at Dresden, I saw a very large collection of models of every description of utensil, also of many machines, mills, carts, &c., &c., made from wood by the pupils themselves. With the names and uses of every part of these they were made familiar. A vocabulary thus learned is much more fully impressed upon the memory than by any

other conceivable mode ; and, as it regards a knowledge of the things themselves, it is the only way of imparting it.

In a large charitable establishment at the Hague, destined for poor young children, whose parents brought them to the school early in the morning and left them till night, when they were ready to return home from their day-labor, I saw an excellent collection of this sort, from which the youngest children could derive much practical and useful knowledge. The great Burger and Real schools are generally supplied with fine instruments for lessons and practice in natural philosophy, chemistry, and mechanics. In Carlsruhe, besides the admirable endowment of such apparatus, which both the State and the friends of education have furnished to this class of schools, the Grand Ducal cabinets, the physical cabinet, collections of natural objects, picture-gallery, botanic garden, even the palace-garden, and also the Grand Ducal court-library, library of the Grand Ducal physical cabinet, that of the directors of the technical courts, and also the workshops and manufactories of the city and environs, are open at all times to the pupils. Pupils studying in the forest department are taken to the governmental woodlands to study botany, &c., among the trees and flowers ; those of the architectural schools, the mining schools, &c., are empowered and even enjoined by law to visit the public works in progress, in company with their teachers.

These facts, besides being valuable as suggestions to us, afford us an idea of the greater practical turn given to education in those countries than amongst ourselves.

Many of the charity-schools of Holland contained painting, of no inconsiderable excellence and value. In Germany, where every thing (excepting war and military affairs) is conducted on an inexpensive scale, the walls of the schoolrooms were often adorned with cheap engravings and lithographs of distinguished men, of birds, beasts, and fishes ; and, in many of them, a cabinet of natural history had been commenced. And throughout all Prussia and Saxony, a most delightful impression was left upon my mind by the character of the persons



whose portraits were thus displayed. Almost without exception, they were likenesses of good men rather than of great ones, — frequently of distinguished educationists and benefactors of the young, whose countenances were radiant with the light of benevolence, and the very sight of which was a moral lesson to the susceptible hearts of children. In this respect, they contrasted most strongly with England, where the great always takes precedence of the good, and where there are fifty monuments and memorials for Nelson and Wellington to one for Howard or Wilberforce.

In the new building for the “poor school,” at Leipsic, there is a large hall in which all the children assemble in the morning for devotional purposes. Over the teacher’s desk, or pulpit, is a painting of Christ in the act of blessing little children. The design is appropriate and beautiful. Several most forlorn-looking, half-naked children stand before him. He stretches out his arms over them, and blesses them. The mother stands by with an expression of rejoicing such as only a mother can feel. The little children look lovingly up into the face of the Saviour. Others stand around, awaiting his benediction. In the background are aged men, who gaze upon the spectacle with mingled love for the children and reverence for their benefactor. Hovering above is a group of angels, hallowing the scene with their presence.

#### LANCASTERIAN OR MONITORIAL SCHOOLS.

I saw many Lancasterian or Monitorial schools in England, Scotland, and Ireland, and a few in France. Some mere vestiges of the plan are still to be found in the “poor schools” of Prussia; but nothing of it remains in Holland or in many of the German States. It has been abolished in these countries by a universal public opinion. Under such an energetic and talented teacher as Mr. Crossley, of the Borough Road School in London, or under such men as I found several of the Edinburgh teachers to be, and especially those of the Madras Col-

lege at St. Andrew's, the monitorial system — where great numbers must be taught at a small expense — may accomplish no inconsiderable good. But at least nine-tenths of all the monitorial schools I have seen would suggest to me the idea that the name "monitorial" had been given them by way of admonishing the world to avoid their adoption. One must see the difference between the hampering, blinding, misleading instruction given by an inexperienced child, and the developing, transforming, and almost creative power of an accomplished teacher; one must rise to some comprehension of the vast import and significance of the phrase "to educate," — before he can regard with a sufficiently energetic contempt that boast of Dr. Bell, "Give me twenty-four pupils to-day, and I will give you back twenty-four teachers to-morrow."

#### SCOTCH SCHOOLS.

There are some points in which the schools of Scotland are very remarkable. In the thoroughness with which they teach the *intellectual* part of reading, they furnish a model worthy of being copied by the world. Not only is the meaning of all the important words in the lesson clearly brought out, but the whole class or family of words to which the principal word belongs are introduced, and their signification given. The pupil not only gains a knowledge of the meaning of all the leading words contained in his exercise, but also of their roots, derivatives, and compounds, and thus is prepared to make the proper discriminations between analogous words whenever he may hear or read them on future occasions. For instance, suppose the word "*circumscribe*" occurs in the lesson: the teacher asks from what Latin words it is derived; and, being answered, he then asks what other English words are formed by the help of the Latin preposition "*circum*." This leads to an explanation of such words as *circumspect*, *circumvent*, *circumjacent*, *circumambient*, *circumference*, *circumflex*, *circumfusion*, *circumnavigate*, *circumstance*, *circumlocution*, &c., &c. The same thing

would then be done in reference to the other etymological component of "*circumscribe*," — viz., "*scribo*;" and here the specific meaning of the words *describe*, *inscribe*, *transcribe*, *ascribe*, *prescribe*, *superscribe*, *subscribe*, &c., &c., would be given. After this might come the nouns, adjectives, and adverbs into which this word enters as one of the elements, such as *scripture*, *manuscript*, &c. The teacher says, "Give me a word which signifies to copy."

*Pupils.* Transcribe.

*T.* To write in a book, or on a tablet.

*P.* Inscribe.

*T.* To write upon, or on the outside of, as on a letter.

*P.* Superscribe.

*T.* To write beneath or under.

*P.* Subscribe.

*T.* A man goes around to obtain the names for a book or newspaper, or to get promises of money for stocks or for charity. What does he want?

*P.* Subscriptions.

*T.* And what are those called who give him their names?

*P.* Subscribers.

*T.* And what is a copy called?

*P.* Transcription.

*T.* Or by way of abbreviation?

*P.* Transcript.

The same is done when a derivative of the Latin word "*pes*" occurs, as in the words *impediment*, *pedestal*, *pediment*, *impede*, *expedite*; or of the word "*duco*," in *induce*, *produce*, *tra-duce*, *reduce*, *adduce*, *conduce*, *inducement*, *induction*, *deduction*, *reduction*, *production*; and then the names of the agents or persons performing these several acts are given.

So of words in which the Greek "*grapho*" is an element, as *geography*, *chirography*, *graphic*, *paragraph*, *telegraph*, *graphite* (a mineral), &c.

The same exercises take place in regard to hundreds of other words.

The Scotch teachers, the great body of whom are graduates of colleges, or have attended the university before beginning to keep school, are perfectly competent to instruct in this thorough manner. I think it obvious, however, that this mode of teaching may be carried too far, as many of our words, though wholly or in part of Latin or Greek derivation, have lost their etymological signification, and assumed a conventional one.

But all this — admirable in its way — was hardly worthy to be mentioned in comparison with another characteristic of the Scottish schools; viz., the mental activity with which the exercises were conducted, both on the part of teacher and pupils. I entirely despair of exciting in any other person, by a description, the vivid impressions of mental activity or celerity which the daily operations of these schools produced in my own mind. Actual observation alone can give any thing approaching to the true idea. I do not exaggerate when I say that the most active and lively schools I have ever seen in the United States must be regarded almost as dormitories, if compared with the fervid life of the Scotch schools; and, by the side of theirs, our pupils would seem to be hibernating animals just emerging from their torpid state, and as yet but half conscious of the possession of life and faculties. It is certainly within bounds to say that there were six times as many questions put and answers given, in the same space of time, as I ever heard put and given in any school in our own country.

But a few preliminary observations are necessary to make any description of a Scotch school intelligible.

In the numerous Scotch schools which I saw, the custom of place-taking prevailed, not merely in spelling, but in geography, arithmetic, reading, defining, &c. Nor did this consist solely in the passing-up of the one giving a right answer above the one giving a wrong. But, if a scholar made a very bright answer, he was promoted at once to the top of the class: if he made a very stupid one, he was sentenced no less summarily to the bottom. Periodically, prizes are given; and the fact of having been "*dux*" (that is, at the head of the class) the

greatest number of times is the principal ground on which the prizes are awarded. In some schools an auxiliary stimulus is applied. The fact of having passed up so many places (say ten or twelve) entitles the pupil to a ticket; and a given number of these tickets is equivalent to being "*dux*" once. When this sharper goad to emulation is to be applied, the spectator will see the teacher fill his hand with small bits of paste-board; and as the recitation goes on, and competition becomes keen, and places are rapidly lost and won, the teacher is seen occasionally to give one of these tickets to a pupil as a counter, or token that he has passed up above so many of his fellows; that is, he may have passed up above four at one time, six at another, and two at another: and, if twelve is the number which entitles to a ticket, one will be given without any stopping or speaking; for the teacher and pupil appear to have kept a silent reckoning, and, when the latter extends his hand, the former gives a ticket without any suspension of the lesson. This gives the greatest intensity to competition; and, at such times, the children have a look of almost maniacal eagerness and anxiety.

I have said that questions were put by the teacher with a rapidity almost incredible. When once put, however, if not answered, they are not again stated in words. If the first pupil cannot answer, the teacher rarely stops to say, "Next;" but — every pupil having his eye on the teacher, and being alive in every sense and faculty, and the teacher walking up and down before the class, and gesticulating vehemently — with his arm extended, and accompanying each motion with his eye, he points to the next, and the next, until perhaps, if the question is difficult, he may have indicated every one in a section, but obtained an answer from none. Then he throws his arm and eye around towards one side of the room, inviting a reply from any one; and, if still unsuccessful, he sweeps them across the other side: and all this will take but half a minute. Words being too slow and cumbrous, the language of signs prevails; and, the parties being all eye and ear, the interchange of ideas has an electric rapidity. While the teacher turns his face and

points his finger towards a dozen pupils consecutively, inviting a reply, perhaps a dozen arms will be extended towards him from other sections or divisions of the class, giving notice that they are ready to respond; and in this way a question will be put to a class of fifty, sixty, or eighty pupils in half a minute of time.

Nor is this all. The teacher does not stand immovably fixed to one spot (I never saw a teacher in Scotland sitting in a schoolroom); nor are the bodies of the pupils mere blocks, resting motionless in their seats, or lolling from side to side as though life were deserting them. The custom is for each pupil to rise when giving an answer. This is ordinarily done so quick, that the body of the pupil, darting from the sitting into the standing posture, and then falling back into the first position, seems more like some instrument sent suddenly forward by a mechanical force, and then rapidly withdrawn, than like the rising and sitting of a person in the ordinary way. But it is obvious that the scene becomes full of animation when — leave being given to a whole division of a class to answer — a dozen or twenty at once spring to their feet, and ejaculate at the top of their voices. The moment it is seen that the question has been rightly answered, and this is instantaneously shown by the manner of the teacher, all fall back, and another question is put. If this is not answered, almost before an attentive spectator can understand it, the teacher extends his arm and flashes his eye to the next, and the next, and so on; and, when a rapid signal is given to another side of the room, a dozen pupils leap to the floor and vociferate a reply.

Nor can the faintest picture of these exciting scenes be given without introducing something of the technical phraseology used in the school.

If a pupil is not prompt at the moment, and if the teacher means to insist upon an answer from him (for it will not do to pass by a scholar always, however dull), he exclaims, in no very moderate or gentle voice, "Come away," or "Come away now;" and if the first does not answer, and the next does, he

directs the latter to pass above the former by the conventional phrase, "Take him down." If a whole section stands at fault for a moment, and then one leaps up, and shouts out the reply, the teacher exclaims, "*Dux*, boy;" which means that the one who answered shall take the head of the class.

Suppose the teacher to be hearing his class in a reading-lesson, and that the word "impediment" occurs, something very like the following scene may take place:—

*Teacher.* "Impediment," from what Latin words?

*Pupil.* *In* and *pes*.

*T.* What does it mean?

*P.* To oppose something against the feet,—to keep them back.

*T.* How is the word "*pes*" used in statuary?

*P.* In pedestal,—the block on which a statue is raised.

*T.* In architecture?

*P.* Pediment.

*T.* In music?

*P.* Pedal, a part of an organ moved by the feet.

*T.* In botany?

*P.* Pedicle, or footstalk of a flower.

*T.* Give me a verb.

*P.* Impede.

*T.* A noun.

*P.* Impediment.

*T.* An adjective which imports despatch in the absence of obstacles.

*P.* Expeditious.

*T.* An adjective meaning desirable or conducive.

*P.* (Hesitates.) *T.* Come away. (To the next.) Come away. (He now points to half a dozen in succession, giving to each not more than a twinkling of time.)

*Ninth pupil.* Expedient.

*T.* Take 'em down. (This pupil then goes above eight.)

All this does not occupy half the time in the class that it takes to read an account of it.

In a school where a recitation in Latin was going on, I witnessed a scene of this kind. The room, unlike the rooms where the children of the common people are taught, was large. Seventy or eighty boys sat on deskless, backless benches, arranged on three sides of a square or parallelogram. A boy is now called upon to recite, — to parse a Latin noun, for instance. But he does not respond quite so quickly as the report of a gun follows the flash. The teacher cries out, "Come away." The boy errs, giving perhaps a wrong gender, or saying that it is derived from a Greek verb, when, in fact, it is derived from a Greek noun of the same family. Twenty boys leap forward into the area, — as though the house were on fire, or a mine or an ambush had been sprung upon them, — and shout out the true answer in a voice that could be heard forty rods. And so the recitation proceeds for an hour.

To an unaccustomed spectator, on entering one of these rooms, all seems uproar, turbulence, and the contention of angry voices, — the teacher traversing the space before his class in a state of high excitement; the pupils springing from their seats, darting to the middle of the floor, and sometimes, with extended arms, forming a circle around him, two, three, or four deep (every finger quivering from the intensity of their emotions), until some more sagacious mind, outstripping its rivals, solves the difficulty, — when all are in their seats again, as though by magic, and ready for another encounter of wits.

I have seen a school kept for two hours in succession in this state of intense mental activity, with nothing more than an alternation of subjects during the time, or perhaps the relaxation of singing. At the end of the recitation, both teacher and pupils would glow with heat, and be covered with perspiration, as though they had been contending in the race or the ring. It would be utterly impossible for the children to bear such fiery excitement if the physical exercise were not as violent as the mental is intense. But children who actually leap into the air from the energy of their impulses, and repeat this as often as once in two minutes on an average, will not suffer from suppressed activity of the muscular system.



The mental labor performed in a given period in these schools, by children under the age of twelve or fourteen years, is certainly many times more than I have ever seen in any schools of our own composed of children as young. With us, the lower classes do not ordinarily work more than half the time while they are in the schoolroom. Even many members of the reciting classes are drowsy and listless, and evidently following some train of thought — if they are thinking at all — whose scene lies beyond the walls of the schoolhouse, rather than applying their minds to the subject-matter of the lesson, or listening to those who are reciting, or feigning to recite it. But, in the mode above described, there is no sleepiness, no droning, no inattention. The moment an eye wanders, or a countenance becomes listless, it is roused by a special appeal ; and the contagion of the excitement is so great as to operate upon every mind and frame that is not an absolute non-conductor to life.

One sees at a glance how familiar the teacher who teaches in this way must be with the whole subject, in order to command the attention of a class at all.

I was told by the Queen's Inspector of the schools in Scotland, that the first test of a teacher's qualification is his power to excite and to sustain the attention of his class. If a teacher cannot do this, he is pronounced, without further inquiry, incompetent to teach.

There are some good schools in England, such as the Normal School at Battersea, those of the Home and Colonial Infant School Society, and the Borough Road School, in London, and some others ; but, as I saw nothing in these superior to what may be seen in good schools at home, I omit all remarks upon them.\*

\* The famous school at Norwood, — eight or ten miles from London, — where more than a thousand of the pauper children of London are collected, is an extraordinary sight, without being an extraordinary school.

## PRUSSIAN AND SAXON SCHOOLS. — SUBJECTS TAUGHT. — MODES OF TEACHING, GOVERNING, ETC.

The questions which the friends of education in Massachusetts have been most anxious to hear answered in regard to the schools of Prussia, Saxony, and some other parts of Germany, are such as these: What branches are taught in them? What are the modes and processes of teaching? What incitements or motive-powers are employed for stimulating the pupils to learn? In fine, what is done when teacher and pupils meet each other face to face in the schoolroom? how is it done, and with what success?

In regard to the grand principles on which our own school-system is organized, we look for no substantial improvement. Our schools are perfectly free. A child would be as much astonished at being asked to pay any sum, however small, for attending our common schools, as he would be if payment were demanded of him for walking in the public streets, for breathing the common air, or enjoying the warmth of the unapproachable sun. Massachusetts has the honor of establishing the first system of free schools in the world; and she projected a plan so elastic and expansive in regard to the course of studies and the thoroughness of instruction, that it may be enlarged and perfected, to meet any new wants of her citizens, to the end of time. Our system, too, is one and the same for both rich and poor; for as all human beings, in regard to their natural rights, stand upon a footing of equality before God, so, in this respect, the human has been copied from the divine plan of government, by placing all citizens on the same footing of equality before the law of the land. For these purposes, therefore, we do not desire to copy or to study the systems of foreign nations, usually so different from our own: we hope, rather, that they will study and copy ours.

And further, in regard to the general organization and maintenance of the Prussian and other German schools, we already have extensive means of knowledge. The Report of M. Cousin,

formerly Minister of Public Instruction in France, upon the Prussian system; the Report of Dr. Bache, late President of Girard College, in regard to all kinds of charitable foundations for instruction in Europe; the admirable Report of Professor Stowe, made to the General Assembly of Ohio in 1837; together with various articles to be found in reviews and other periodicals published within the last twenty years, — will supply the general reader with all that he will care to know on these topics. My purpose, therefore, is to confine myself to those points respecting which we have not as yet adequate means of information; and to refer to what has been sufficiently detailed by other inquirers, only when necessary for the sake of giving unity and intelligibleness to my own remarks.

I ought to premise that I have visited but a small number of the thirty-eight German States, and seen comparatively but a few of the schools in that great Confederation. My tour was made through Prussia, Saxony, the Grand Duchy of Nassau, of Hesse-Darmstadt, Baden, and a few of the smaller States, together with Hamburg and Frankfort, the largest of the free cities belonging to the Confederation. This cautionary statement is necessary, because travellers are apt to generalize their facts, making particular instances represent whole countries; and perhaps readers are quite as prone to this generalization as writers. Prussia contains a population of fourteen or fifteen millions, Saxony about two millions; and, in the schools of these and other German States, I spent from six weeks to two months, using all practicable diligence in going from place to place, visiting schools and conversing with teachers and school-officers by day, and examining educational pamphlets, reports, &c., at night. But, of course, I could visit only a small part of the schools which represent a population of eighteen or twenty millions. Perhaps I saw as fair a proportion of the Prussian and Saxon schools as one would see of the schools in Massachusetts who should visit those of Boston, Newburyport, Lexington, New Bedford, Worcester, Northampton, and Springfield.

The authority and control assumed by the above-mentioned governments over the youth of the State are very extensive. The impartial observer, however, is bound to admit that this assumption is not wholly for the aggrandizement of the rulers ; that authority is not claimed in the mere spirit of arbitrary power, but, to a great extent, for the welfare of the subject. A gentleman who formerly resided in one of the smaller German States, and who there exercised the office of judge, a part of whose functions was the appointment of guardians to minors and others (in this respect analogous to one of the duties of our Judges of Probate), told me that it was the common custom of himself and his brethren in office, when a guardian appeared to render his annual account, to require him to produce the ward, as well as the account, for the inspection of the court ; and no final account of a guardian was ever settled without a personal inspection of the ward by the judge. In these interviews, not a little could be learned, by the personal manners, address, and appearance of the ward, as to the fidelity with which the guardian had attended to the health, habits, and education of his charge.

Another fact which will strike the visitor to these countries with mingled sorrow and joy is the number and the populousness of their orphan establishments. In the great cities, almost without exception, one or more of these is to be found. The wars of Europe have torn away the fathers from the protection of their families ; and, for long periods, almost all that many thousands of children knew of the parent, who should have been their guide and counsellor until mature age, was, that he died in the camp, or added another unit to the slaughtered hosts of the battle-field. But it must be allowed that the governments have done something, however inadequate, to atone for their enormous guilt. The orphan-houses, originally established mainly for this class of bereaved children, have been, since the general pacification of Europe, appropriated to orphans of other classes. Here their living, including board, clothes, lodging, and excellent instruction in all the element-

ary branches, with drawing, music, &c., are gratuitously furnished.

In the Royal Orphan House, at Potsdam, for instance, there are a thousand boys, — all the children of soldiers. They seem collected there as a monument of the havoc which war makes of men. Connected with this, though in another place, is an establishment for the orphan daughters of soldiers. The institution for boys differed from most others of the same class which I saw, in paying great attention to physical training. As the boys are destined for the army, it is thought important to give them agility and vigor; and, at the age of fourteen, the institution discards those who are not healthy. It is not yet discovered that activity and energy are necessary in any occupation save that of killing our fellow-men. The boys practise gymnastic exercises, — such as climbing poles, ascending ropes, flinging their bodies round and round over a bar while they hold on only by the bend of the legs at the knee-joints, vaulting upon the wooden-horse, &c., — until their physical feats reach a point of perfection which I have never seen surpassed, except by professional circus-riders or rope-dancers. It is of these pupils that Dr. Bache says, “I have never seen a body of young men all so well physically developed; a result produced by constant attention to their education on this point.” In the dormitories, however, I saw the same fearful assemblage of feather-beds as elsewhere, — a hundred and forty in a room. But the rooms had the redeeming circumstance of being well ventilated.

The Franke Institute, at Halle, founded about the beginning of the last century, now numbering nearly three thousand pupils (a small part only, at the present time, are orphans), is considered the parent of this class of institutions in Germany; and a more admirable establishment of the kind, or one conducted with more intelligence and utility, probably does not exist in the world.

Another class of institutions should challenge the admiration of all civilized people, and be imitated in every nation. I refer

to schools established in connection with prisons. When a Prussian parent has forfeited his liberty by the commission of a crime, and is therefore sequestered from society and from his family, his children are not left to abide the scorn of the community, nor abandoned to the tender mercies of chance. The mortification of having a disgraced parent seems enough, without the life-long calamity of a neglected youth. Hence such children are taken and placed under the care of a wise and humane teacher, who supplies to them that parental guidance which it has been their affliction to lose. Indeed, such care is taken in selecting the teachers of these schools, that the transfer into their hands generally proves a blessing to the children. Thus society is saved from the depredations and the expense of a second, perhaps of a third and a fourth generation of criminals, through these acts of foresight and prevention, — acts which are as clearly connected with sound worldly policy as with those higher moral and religious obligations which bind the conscience of every citizen and legislator.

Prussia and Saxony have still another class of institutions of the most beneficent description ever devised by man. These are reformatory establishments for youthful offenders; or, as they are most expressively and beautifully called in the language of the country, Redemption Institutes. The three principal establishments of this class which I visited were, one at Hamburg, under the care of Mr. Wichern; one just outside the Halle gate of the city of Berlin, superintended by Mr. Kopf; and one at Dresden under Mr. Schubert. At this latter place, for the first and only time in Germany, I heard correct physiological principles advocated in theory, and thoroughly carried out in practice. Here the feather-bed as a covering was disused and condemned, the woollen blanket being substituted for it; and the principal, not knowing my views upon the subject, began to defend his abandonment of the common practice with something of the zeal of a reformer.\*

\* At an orphan school, near by, woollen was also used as a covering instead of feathers; but here the principal apologized for the absence of the latter, by saying the children and the institution were too poor to afford them.

Some of the facts connected with the Redemption Institute at Hamburg are so extraordinary, and illustrate so forcibly the combined power of wisdom and love in the reformation of vicious children, that I cannot forbear detailing them.

The school of Mr. J. H. Wichern is called the *Rauhe Haus*, and is situated four or five miles out of the city of Hamburg. It was opened for the reception of abandoned children of the very lowest class, — children brought up in the abodes of infamy, and taught, not only by example but by precept, the vices of sensuality, thieving, and vagabondry, — children who had never known the family tie, or who had known it only to see it violated. Hamburg having been for many years a *commercial* and *free* city, and, of course, open to adventurers and renegades from all parts of the world, has many more of this class of population than its own institutions and manners would have bred. The thoughts of Mr. Wichern were strongly turned towards this subject while yet a student at the university; but want of means deterred him from engaging in it, until a legacy left by a Mr. Gercken enabled him to make a beginning in 1833. He has since devoted his life and all his worldly goods to the work. It is his first aim that the abandoned children whom he seeks out on the highway, and in the haunts of vice, shall know and feel the blessings of *domestic* life; that they shall be introduced into the bosom of a family: for this he regards as a divine institution, and therefore the birthright of every human being, and the only atmosphere in which the human affections can be adequately cultivated. His house, then, must not be a prison, or a place of punishment or confinement. The site he had chosen for his experiment was one enclosed within high, strong walls and fences. His first act was to break down these barriers, and to take all bolts and bars from the doors and windows. He began with three boys of the worst description; and, within three months, the number increased to twelve. They were taken into the bosom of Mr. Wichern's family: his mother was

their mother, and his sister their sister. They were not punished for any past offences, but were told that all should be forgiven them if they tried to do well in future. The defenceless condition of the premises was referred to, and they were assured that no walls or bolts were to detain them; that one cord only should bind them, and that the cord of love. The effect attested the all but omnipotent power of generosity and affection. Children from seven or eight to fifteen or sixteen years of age, in many of whom early and loathsome vices had nearly obliterated the stamp of humanity, were transformed not only into useful members of society, but into characters that endeared themselves to all within their sphere of acquaintance. The education given by Mr. Wichern has not been an æsthetic or literary one. The children were told at the beginning that labor was the price of living, and that they must earn their own bread if they would secure a comfortable home. He did not point them to ease and affluence, but to an honorable poverty, which, they were taught, was not in itself an evil. Here were means and materials for learning to support themselves; but there was no rich fund or other resources for their maintenance. Charity had supplied the home to which they were invited; their own industry must supply the rest. Mr. Wichern placed great reliance upon religious training; but this did not consist in giving them dry and unintelligible dogmas. He spoke to them of Christ, as the benefactor of mankind, who proved by deeds of love his interest in the race; who sought out the worst and most benighted of men to give them instruction and relief; and who left it in charge to those who came after him, and wished to be called his disciples, to do likewise. Is it strange that, enforced by such a practical exemplification of Christian love as their fatherly benefactor gave them in his every-day life, the story of Christ's words and deeds should have sunk deeply into their hearts, and melted them into tenderness and docility? Such was the effect. The most rapid improvement ensued in the great majority of the children; and even those whom long habits of idleness and



vagabondry made it difficult to keep in the straight path had long seasons of obedience and gratitude, to which any aberration from duty was only an exception.

As the number of pupils increased, Mr. Wichern saw that the size of the family would seriously impair its domestic character. To obviate this, he divided his company into families of twelve; and he has erected nine separate buildings, situated in a semicircle around his own, and near to it, in each of which dwells a family of twelve boys or of twelve girls, under the care of a House-Father or House-Mother, as the assistants are respectively called. Each of these families is, to some extent, an independent community, having an individuality of its own. They eat and sleep in their own dwelling; and the children belonging to each look up to their own particular father or mother, as home-bred children to a parent. The general meeting every morning, — at first in the chamber of Mr. Wichern's mother, but afterwards, when the numbers increased, in the little chapel, — and their frequent meetings at work, or in the play-ground, form a sufficient, and, in fact, a very close bond of union for the whole community. Much was done by the children themselves in the erection of their little colony of buildings; and, in doing this, they were animated by a feeling of hope and a principle of independence in providing a dwelling for themselves, while they experienced the pleasures of benevolence in rendering assistance to each other. Mr. Wichern mentions, with great satisfaction, the good spirit of the architect who came upon the premises to direct in putting up the first house. This man would not retain a journeyman for a day or an hour who did not conduct with the utmost decorum and propriety before the children who were assisting in the work.

Instruction is given in reading, writing, arithmetic, singing, and drawing; and, in some instances, in higher branches. Music is used as one of the most efficient instruments for softening stubborn wills, and calling forth tender feelings; and its deprivation is one of the punishments for delinquency. The

songs and hymns have been specially adapted to the circumstances and wants of the community ; and it has often happened that the singing of an appropriate hymn, both at the gatherings in the mother's chamber, which were always more or less kept up, and in the little chapel, has awakened the first-born sacred feeling in obdurate and brutified hearts. Sometimes a voice would drop from the choir, and then weeping and sobbing would be heard instead. The children would say they could not sing ; they must think of their past lives, of their brothers and sisters, or of their parents living in vice and misery at home. On several occasions, the singing exercise had to be given up. Frequently the children were sent out to the garden to recover themselves. An affecting narrative is recorded of a boy who ran away, but whom Mr. Wichern pursued, found, and persuaded to return. He was brought back on Christmas Eve, which was always celebrated in the mother's chamber. The children were engaged in singing the Christmas hymns when he entered the room. At first, they manifested strong disapprobation of his conduct ; for he was a boy to whose faults special forbearance had been previously shown. They were then told to decide among themselves how he should be punished. This brought them all to perfect silence ; and, after some whispering and consulting together, one who had formerly been guilty of the same fault of ingratitude, under still less excusable circumstances, burst out in a petition for his forgiveness. All united in it, reached out to him a friendly hand ; and the festival of the Christmas Eve was turned into a rejoicing over the brother that had been lost, but was found. The pardon was not in words merely, but in deeds. No reference to the fact was afterwards made. A day or two after, he was sent away on an errand to the distance of half a mile. He was surprised and affected by this mark of confidence ; and from that time never abused his freedom, though intrusted to execute commissions at great distances. But he could never after hear certain Christmas hymns without shedding tears ; and long subsequently, in a confidential communication to Mr.

Wichern respecting some act of his former life (an unburdening of the overladen conscience, which was very common with the inmates, and always voluntary ; for they were told on their arrival that their past life should never be spoken of unless between them and himself), he referred to the decisive effect of that scene of loving-kindness upon his feelings and character

One peculiar feature of this institution is, that the children are not stimulated by the worldly motives of fame, wealth, or personal aggrandizement. The superintendent does not inflame them with the ambition, that if they surpass each other at recitation, and make splendid displays at public examinations, they shall, in the end, become high military officers or congressmen, or excite the envy of all by their wealth or fame. On the other hand, so far as this world's goods are concerned, he commends and habituates them to the idea of an honorable poverty ; and the only riches with which he dazzles their imaginations are the riches of good works. He looks to them as his hope for redeeming others from the sphere whence they were taken ; and there have been many touching instances of the reformation of parents and families, for whom the natural affection first sprang up in these children's hearts after they had learned the blessings of home.

One of the most interesting effects of this charity is the charity which it reproduces in its objects ; and thus it is shown that, in the order of nature, the actions of good men, — provided they are also wise, — not less than good seed, will produce thirty or sixty or a hundred fold of beneficent fruit. Mr. Wichern makes a great point of celebrating Christmas ; and the friends of the school are in the habit of sending small sums of money, and articles of various kinds, to adorn the festival. This money has often been appropriated, voluntarily, by the children, to charitable purposes. They frequently give away their pennies ; and instances have happened where they have literally emptied their little purses into the hands of poverty and distress, and taken off their own clothes to cover the naked.

On one occasion, six poor children had been found by some of the scholars, and invited to the Christmas festival. There they were clothed, and many useful and pleasing articles made by the givers were presented to them. One of the boys read a passage from the history of Christ; and the Christmas songs and other songs of thanksgiving and praise were sung. To the sound of the organ which a friend had presented to the little chapel, some verses welcoming the strangers succeeded. The guests then departed, blessing the house and its kind inhabitants; but who can doubt that a voice of gladness more precious than all worldly applauses sprang up unbidden and exulting in the hearts of the little benefactors?

But, among numerous less conspicuous instances of the change wrought by wise and appropriate moral means in the character of these so lately abandoned children, the most remarkable occurred at the time of the great Hamburg fire, in May, 1842. In July, 1843, I saw the vast chasm which the conflagration had made in the centre of that great city. The second day of the fire, when people were driven from the city in crowds, and houseless and half-frantic sufferers came to the Rauhe House for shelter, the children — some of whom had friends and relatives in the city — became intensely excited, and besought Mr. Wichern for leave to go in and make themselves useful to the sufferers. Not without great anxiety as to the force of the temptations for escape or for plunder that might assail them in such an exposed and tumultuous scene, he gave permission to a band of twenty-two to accompany him, on condition that they would keep together as much as possible, and return with him at an appointed time. This they readily promised, nor did they disappoint him. Their conduct was physically as well as morally heroic. They rushed into the greatest dangers to save life and property; and, though sometimes pressed to receive rewards, they steadfastly refused them. At stated intervals, they returned to the appointed place to re-assure the confidence of their superior. On one occasion, a lad remained absent long beyond the time agreed upon; but at

last he appeared, quite exhausted by the labor of saving some valuable property. Mr. Wichern afterwards learned from the owner — not from the lad — that he had steadily refused the compensation offered to and even urged upon him. When the company returned home at the appointed time, he sent forth another band under the care of a House-Father; and these exerted themselves in the same faithful and efficient manner. This was done as long as the necessity of the case required. From this time, the Rauhe House was the resort of the poor and homeless; and not for days only, but for weeks. The pupils shared with them their food, and even slept upon the ground to give their beds to the destitute, sick, and injured. I can hardly refrain from narrating many other facts of a similar character connected with this institution; for if the angels rejoice over a rescued sinner, why should not we partake of that joy when it is our brother who is ransomed?

In his last report, Mr. Wichern says the institution was actually so impoverished by the demand made upon it at that time, and the demands upon public charity have since been so great in that unfortunate city, that the inmates have been almost reduced to suffering for the necessities of life, particularly as they were induced to receive several children rendered homeless by that calamity. To this object, however, even the children of the house were ready and willing to contribute portions of their wardrobe, and they submitted cheerfully to other privations. Mr. Wichern regretted, above all other things, the necessity of refusing many applications; and it is but doing justice to the citizens of Hamburg to state, that, on an appeal made by him for funds to erect a new building, they were generously and promptly raised by those who had such unusual claims upon their charity.

A single remark I must be allowed to make. When an individual effects so much good, it seems to be often thought that he accomplishes it by virtue of some charm or magic, or preternatural influence, of which the rest of the world cannot partake. The superintendent of the Rauhe House is a refuta-

tion of this idea. Laboriously, perseveringly, unintermittingly, he uses **MEANS** for the accomplishment of his desired ends. When I put to him the question, in what manner he produced these transforming effects upon his charge, his answer was, "By active occupations, music, and Christian love." Two or three things should be stated in explanation of this compendious reply. When a new subject comes to the Rauhe House, he is first received into Mr. Wichern's own family. Here, under the wise and watchful guardianship of the master, he is initiated into the new life of action, thought, feeling, which he is expected to lead. His dispositions are watched, his character is studied; and, as soon as prudence allows, he is transferred to that one of the little colonies whose House-Father is best qualified to manage his peculiarities of temperament and disposition. Soon after the opening of the establishment, and the increase of its numbers, Mr. Wichern found that it would be impossible for him to bestow the requisite care and oversight upon each one of his pupils which his necessities demanded. He cast about for assistance; and though he was able to find those in the community who had enough of the spirit of benevolence and self-sacrifice to undertake the difficult labor to which his own life was devoted, yet he soon found that they had not the other requisite qualifications to make their benevolent purposes available. He could find enough well-intentioned persons to superintend the work-shops, gardens, &c.; but they had not intellectual competency. So he could find schoolmasters who could give good lessons; but they were not masters of any handicraft. He was therefore driven, as he says, to the expedient of preparing a class of teachers to become his auxiliaries in the work. For this end, he has superadded to his original plan a school for the preparation of teachers, — first to supply himself, then to send abroad to open other institutions similar to his own, and thirdly to become superintendents of prisons. This last object he deems very important. Questions about prison-architecture, he says, have given a new literature to the world; but as yet nothing, or but

little, is done to improve the character or increase the qualifications of prison-keepers. I have often felt the force of this remark in the numerous Continental prisons which I have visited. Though the masters of the prisons have generally appeared to be very respectable men, yet the assistants or deputy-turnkeys have very often seemed to belong to a low order of society, from whose manners, conversation, or treatment of the prisoners, no good influence could be expected.

This second institution of Mr. Wichern is in reality a normal school, which the necessities of his situation suggested, and forced him to establish.

During the ten years of the existence of this institution, there have been one hundred and thirty-two children received into it. Of these, about eighty were there on the 1st of July, 1843. Only two had run away, who had not either voluntarily returned, or, being brought back, had not voluntarily remained. The two unreclaimed fugitives committed offences, fell into the hands of the civil magistrate, and were imprisoned.

Who can reflect upon this history, where we see a self-sacrificing man, by the aids of wisdom and Christian love, exorcising, as it were, the evil spirits from more than a hundred of the worst children whom a corrupted state of society has engendered, — who can see this, without being reminded of some case, perhaps within his own personal knowledge, where a passionate, ignorant, and perverse teacher, who for the sake of saving a few dollars of money, or from some other low motive, has been put in possession of an equal number of fine-spirited children, and has, even in a shorter space of time, put an evil spirit into the bosom of them all? When visiting this institution, I was reminded of an answer given to me by the head master of a school of a thousand children in London. I inquired of him what moral education or training he gave to his scholars; what he did, for instance, when he detected a child in a lie. His answer was literally this: “I consider,” said he, “all moral education to be a humbug. Nature teaches children to lie. If one of my boys lies, I set him to write some such copy as this: ‘Lying is a

base and infamous offence.' I make him write a quire of paper over with this copy ; and he knows very well, that, if he does not bring it to me in a good condition, he will get a flogging." On hearing this reply, I felt as if the number of things in surrounding society which needed explanation was considerably reduced.

What is most remarkable in reference to the class of institutions now under consideration is the high character of the men — for capacity, for attainments, for social rank — who preside over them. At the head of a private orphan house in Potsdam is the venerable Von Türk. According to the laws of his country, Von Türk is a nobleman. His talents and acquisitions were such, that, at a very early age, he was elevated to the bench. This was, probably, an office for life, and was attended with honors and emoluments. He officiated as judge for fourteen years ; but, in the course of this time, so many criminal cases were brought before him for adjudication, whose only cause and origin were so plainly referable to early neglect in the culprit's education, that the noble heart of the judge could no longer bear to pronounce sentence of condemnation against the prisoners ; for he looked upon them as men, who, almost without a paradox, might be called *guiltless offenders*. While holding the office of judge, he was appointed school inspector. The paramount importance of the latter office grew upon his mind as he executed its duties, until at last he came to the full conception of the grand and sacred truth, — that the vocation of the teacher, who saves from crime and from wrong, is much more intrinsically honorable than that of the magistrate, who waits till they are committed, and then avenges them. He immediately resigned his office of judge, with its life-tenure and its salary ; travelled to Switzerland, where he placed himself under the care of Pestalozzi ; and, after availing himself for three years of the instructions of that celebrated teacher, he returned to take charge of an orphan asylum. Since that time, he has devoted his whole life to the care of the neglected and destitute. He lives in as plain and inexpensive a style as our well-off



farmers and mechanics, and devotes his income to the welfare of the needy. I was told by his personal friends that he not only deprived himself of the luxuries of life, but submitted to many privations, in order to appropriate his small income to others whom he considered more needy ; and that his wife and family cordially and cheerfully shared such privations with him for the same object. To what extent would our own community sympathize with or appreciate the act, if one of the judges of our higher courts, or any other official dignitary, should resign an office of honor and of profit to become the instructor of children !

Even now, when the once active and vigorous frame of this patriarchal man is bending beneath the weight of years, he employs himself in teaching agriculture, together with the branches commonly taught in the Prussian schools, to a class of orphan boys. What warrior, who rests at last from the labors of the tented field after a life of victories ; what statesman, whose name is familiar in all the courts of the civilized world ; what orator, who attracts towards himself tides of men wherever he may move in his splendid course, — what one of all these would not, at the sunset of life, exchange his fame and his clustering honors for that precious and abounding treasury of holy and beneficent deeds, the remembrance of which this good old man is about to carry into another world ! Do we not need a new spirit in our community, and especially in our schools, which shall display only objects of virtuous ambition before the eyes of our emulous youth, and teach them that no height of official station, nor splendor of professional renown, can equal in the eye of Heaven, and of all good men, the true glory of a life consecrated to the welfare of mankind ?

#### CLASSIFICATION.

The first element of superiority in a Prussian school, and one whose influence extends throughout the whole subsequent course of instruction, consists in the proper classification of the

scholars. In all places where the numbers are sufficiently large to allow it, the children are divided according to ages and attainments; and a single teacher has the charge only of a single class, or of as small a number of classes as is practicable. I have before adverted to the construction of the school-houses, by which, as far as possible, a room is assigned to each class. Let us suppose a teacher to have the charge of but one class, and to have talent and resources sufficient properly to engage and occupy its attention, and we suppose a perfect school. But how greatly are the teacher's duties increased and his difficulties multiplied if he have four, five, or half a dozen classes under his personal inspection! While attending to the recitation of one, his mind is constantly called off to attend to the studies and the conduct of all the others. For this, very few teachers amongst us have the requisite capacity; and hence the idleness and the disorder that reign in so many of our schools, excepting in cases where the debasing motive of fear puts the children in irons. All these difficulties are at once avoided by a suitable classification,—by such a classification as enables the teacher to address his instructions at the same time to all the children who are before him, and to accompany them to the playground, at recess or intermission, without leaving any behind who might be disposed to take advantage of his absence. All this will become more and more obvious as I proceed with a description of exercises. There is no obstacle whatever—save prescription, and that *vis inertia* of mind which continues in the beaten track because it has not vigor enough to turn aside from it—to the introduction, at once, of this mode of dividing and classifying scholars in all our large towns.

METHOD OF TEACHING YOUNG CHILDREN ON THEIR FIRST  
ENTERING SCHOOL.

In regard to this as well as other modes of teaching, I shall endeavor to describe some particular lesson that I heard. The Prussian and Saxon schools are all conducted substantially upon

the same plan, and taught in the same manner. Of course, there must be those differences to which different degrees of talent and experience give rise.

In Professor Stowe's excellent report, he says, "Before the child is even permitted to learn his letters, he is under conversational instruction frequently, for six months or a year; and then a single week is sufficient to introduce him into intelligent and accurate plain reading." I confess, that, in the numerous schools I visited, I did not find this preparatory instruction carried on for any considerable length of time before lessons in which all the children took part were commenced.

About twenty years ago, teachers in Prussia made the important discovery, that children have five senses, together with various muscles and mental faculties, all which, almost by a necessity of their nature, must be kept in a state of activity, and which, if not usefully, are liable to be mischievously employed. Subsequent improvements in the art of teaching have consisted in supplying interesting and useful, instead of mischievous occupation for these senses, muscles, and faculties. Experience has now proved that it is much easier to furnish profitable and delightful employment for all these powers than it is to stand over them with a rod and stifle their workings, or to assume a thousand shapes of fear to guard the thousand avenues through which the salient spirits of the young play outward. Nay, it is much easier to keep the eye and hand and mind at work together than it is to employ either one of them separately from the others. A child is bound to the teacher by so many more cords, the more of his natural capacities the teacher can interest and employ.

In the case I am now to describe, I entered a classroom of sixty children of about six years of age. The children were just taking their seats, all smiles and expectation. They had been at school but a few weeks, but long enough to have contracted a love for it. The teacher took his station before them, and after making a playful remark which excited a light titter around the room, and effectually arrested attention, he gave a

signal for silence. After waiting a moment, during which every countenance was composed and every noise hushed, he made a prayer consisting of a single sentence, asking that, as they had come together to learn, they might be good and diligent. He then spoke to them of the beautiful day, asked what they knew about the seasons, referred to the different kinds of fruit-trees then in bearing, and questioned them upon the uses of trees in constructing houses, furniture, &c. Frequently he threw in sportive remarks which enlivened the whole school, but without ever producing the slightest symptom of disorder. During this familiar conversation, which lasted about twenty minutes, there was nothing frivolous or trifling in the manner of the teacher: that manner was dignified, though playful; and the little jets of laughter which he caused the children occasionally to throw out were much more favorable to a receptive state of mind than jets of tears.

Here I must make a preliminary remark in regard to the equipments of the scholars, and the furniture of the schoolroom. Every child had a slate and pencil, and a little reading-book of letters, words, and short sentences. Indeed, I never saw a Prussian or Saxon school, above an infant school, in which any child was unprovided with a slate and pencil. By the teacher's desk, and in front of the school, hung a blackboard. The teacher first drew a house upon the blackboard; and here the value of the art of drawing — a power universally possessed by Prussian teachers — became manifest. By the side of the drawing, and under it, he wrote the word "house" in the German script hand, and printed it in the German letter. With a long pointing-rod, — the end being painted white to make it more visible, — he ran over the form of the letters; the children, with their slates before them, and their pencils in their hands, looking at the pointing-rod, and tracing the forms of the letters in the air. In all our good schools, children are first taught to imitate the forms of letters on the slate, before they write them on paper; here they were first imitated on the air, then on slates, and subsequently, in older classes, on paper. The next

process was to copy the word "house," both in script and in print, on their slates. Then followed the formation of the sounds of the letters of which the word was composed, and the spelling of the word. Here the *names* of the letters were not given as with us, but only their powers, or the sounds which those letters have in combination. The letter *h* was first selected and set up in the reading-frame (the same before described as part of the apparatus of all Prussian schools for young children); and the children, instead of articulating our alphabetic *h* (aitch), merely gave a hard breathing, — such a sound as the letter really has in the word "house." Then the diphthong *au* (the German word for "house" is spelled "haus") was taken and sounded by itself in the same way. Then the blocks containing *h* and *au* were brought together, and the two sounds were combined. Lastly, the letter *s* was first sounded by itself, then added to the others; and then the whole word was spoken. Sometimes the last letter in a word was first taken and sounded, after that the penultimate, and so on, until the word was completed. The responses of the children were sometimes individual, and sometimes simultaneous, according to a signal given by the master.

In every such school, also, there are printed sheets or cards, containing the letters, diphthongs, and whole words. The children are taught to sound a diphthong, and then asked in what words that sound occurs. On some of these cards, there are words enough to make several short sentences; and, when the pupils are a little advanced, the teacher points to several isolated words in succession, which, when taken together, make a familiar sentence; and thus he gives them an agreeable surprise, and a pleasant initiation into reading.

After the word "house" was thus completely impressed upon the minds of the children, the teacher drew his pointing-rod over the lines which formed the house; and the children imitated him, first in the air, while they were looking at his motions, then on their slates. In their drawings, there was, of course, a great variety as to taste and accuracy; but each seemed

pleased with his own, for their first attempts had never been so criticised as to produce discouragement. Several children were then called to the blackboard to draw a house with chalk. After this, the teacher entered into a conversation about houses. The first question was, "What kind of a house was that on the blackboard?" Then the names of other kinds of houses were given. The materials of which houses are built were mentioned, — stone, brick, wood; the different kinds of wood; nails, and where they were made; lime, and whence it came, &c. When the teacher touched upon points with which the children were supposed to be acquainted, he asked questions; when he passed to subjects beyond their sphere, he gave information, intermingling the whole with lively remarks and pleasant anecdotes.

And here one important particular should not be omitted. In this as well as in all other schools, a complete answer was always required. For instance, if a teacher asks, "What are houses made of?" he does not accept the answer, "Of wood" or "Of stone;" but he requires a full, complete (*vollständig*) answer, as "A house may be made of wood." The answer must always contain an intelligible proposition, without reference to the words of the question to complete it. And here, also, the greatest care is taken that the answer shall always be grammatically correct, have the right terminations of all articles, adjectives, and nouns, and the right grammatical transpositions according to the idioms and structure of the language. This secures, from the beginning, precision in the expression of ideas; and if, as many philosophers suppose, the intellect could never carry forward its processes of argument or investigation to any great extent, without using language as its instrument, then these children, in their primary lessons, are not only led to exercise the intellect, but the instrument is put into their hands by which its operations are facilitated.

When the hour had expired, I do not believe there was a child in the room who knew or thought that his playtime had come. No observing person can be at a loss to understand

how such a teacher can arrest and retain the attention of his scholars. It must have happened to almost every one, at some time in his life, to be present as a member of a large assembly, when some speaker, in the midst of great uproar and confusion, has arisen to address it. If, in the very commencement of his exordium, he makes what is called a happy hit which is answered by a response of laughter or applause from those who are near enough to hear it, the attention of the next circle will be aroused. If, then, the speaker makes another felicitous sally of wit or imagination, this circle, too, becomes the willing subject of his power; until, by a succession of flashes, whether of genius or of wit, he soon brings the whole audience under his command, and sways it as the sun and moon sway the tide. This is the result of talent, of attainment, and of the successful study both of men and of things; and whoever has a sufficiency of these requisites will be able to command the attention of children, just as a powerful orator commands the attention of men. But the one no more than the other is the unbought gift of Nature. They are the rewards of application and toil superadded to talent.

Now, it is obvious, that, in the single exercise above described, there were the elements of reading, spelling, writing, grammar, and drawing, interspersed with anecdotes, and not a little general information; and yet there was no excessive variety, nor were any incongruous subjects forcibly brought together. There was nothing to violate the rule of "one thing at a time."

Compare the above method with that of calling up a class of abecedarians, or, what is more common, a single child; and while the teacher holds a book or a card before him, and, with a pointer in his hand, says *a*, and he echoes *a*; then *b*, and he echoes *b*; and so on until the vertical row of lifeless and ill-favored characters is completed; and then of remanding him to his seat to sit still and look at vacancy. If the child is bright, the time which passes during this lesson is the only part of the day when he does not think. Not a single faculty of the mind is occupied, except that of imitating sounds; and

even the number of these imitations amounts only to twenty-six. A parrot or an idiot could do the same thing. And so of the organs and members of the body. They are condemned to inactivity; for the child who stands most like a post is most approved, nay, he is rebuked if he does not stand like a post. A head that does not turn to the right or left, an eye that lies moveless in its socket, hands hanging motionless at the side, and feet immovable as those of a statue, are the points of excellence while the child is echoing the senseless table of *a, b, c*. As a general rule, six months are spent before the twenty-six letters are mastered, though the same child would learn the names of twenty-six playmates or twenty-six playthings in one or two days.

All children are pleased with the idea of a house, a hat, a top, a ball, a bird, an egg, a nest, a flower, &c.; and when their minds are led to see new relations or qualities in these objects, or when their former notions respecting them are brought out more vividly, or are more distinctly defined, their delight is even keener than that of an adult would be in obtaining a new fact in science, or in having the mist of some old doubt dispelled by a new discovery. Lessons on familiar objects, given by a competent teacher, never fail to command attention; and thus a habit of mind is induced of inestimable value in regard to all future study.

Again: the method I have described necessarily leads to conversation, and conversation with an intelligent teacher secures several important objects. It communicates information. It brightens ideas before only dimly apprehended. It addresses itself to the various faculties of the mind, so that no one of them ever tires or is cloyed. It teaches the child to use language, to frame sentences, to select words which convey his whole meaning, to avoid those which convey either more or less than he intends to express; in fine, it teaches him to seek for thoughts upon a subject, and then to find appropriate language in which to clothe them. A child trained in this way will never commit those absurd and ludicrous mistakes into



which uneducated men of some sense not unfrequently fall ; viz., that of mismatching their words and ideas, of hanging, as it were, the garments of a giant upon the body of a pygmy, or of forcing a pygmy's dress upon the huge limbs of a giant. Appropriate diction should clothe just ideas, as a tasteful and substantial garb fits a graceful and vigorous form.

The above-described exercise occupies the eye and the hand as well as the mind. The eye is employed in tracing visible differences between different forms, and the hand in copying whatever is presented, with as little difference as possible. And who ever saw a child that was not pleased with pictures, and an attempt to imitate them ? Thus the two grand objects so strenuously insisted upon by writers in regard to the later periods of education and the maturer processes of thought are attained ; viz., the power of recognizing analogies and dissimilarities.

I am satisfied that our greatest error in teaching children to read, lies in beginning with the alphabet,—in giving them what are called the “Names of the Letters,” *a, b, c, &c.* How can a child to whom Nature offers such a profusion of beautiful objects, of sights and sounds and colors, and in whose breast so many social feelings spring up,—how can such a child be expected to turn with delight from all these to the stiff and lifeless column of the alphabet ? How can one, who as yet is utterly incapable of appreciating the remote benefits which in after-life reward the acquisition of knowledge, derive any pleasure from an exercise which presents neither beauty to his eye, nor music to his ear, nor sense to his understanding ?

Although, in former reports and publications, I have dwelt at length upon what seems to me the absurdity of teaching to read by *beginning* with the alphabet, yet I feel constrained to recur to the subject again ; being persuaded that no thorough reform will ever be effected in our schools until this practice is abolished.

When I first began to visit the Prussian schools, I uniform-

ly inquired of the teachers, whether, in teaching children to read, they began with the names of the letters as given in the alphabet. Being delighted with the prompt negative which I invariably received, I persevered in making the inquiry, until I began to perceive a look and tone on their part, not very flattering to my intelligence, in considering a point so clear and so well settled as this to be any longer a subject for discussion or doubt. The uniform statement was, that the alphabet, as such, had ceased to be taught, as an exercise preliminary to reading, for the last fifteen or twenty years, by every teacher in the kingdom. Whoever will compare the German language with the English will see that the reasons for a change are much stronger in regard to our own than in regard to the foreign tongue.

The practice of beginning with the names of letters is founded upon the idea that it facilitates the combination of them into words. On the other hand, I believe that if two children, of equal quickness and capacity, are taken, one of whom can name every letter of the alphabet at sight, and the other does not know them from Chinese characters, the latter can be most easily taught to read, — in other words, that learning the letters first is an absolute hinderance.

The advocate for teaching the letters asks if the elements of an art or science should not be first taught. To this I would reply, that the names of the letters are not elements in the sounds of words, or are so only in a comparatively small number of cases. To the twenty-six letters of the alphabet the child is taught to give twenty-six sounds, and no more. According to Worcester, however, — who may be considered one of the best authorities on this subject, — the six vowels only, have, collectively, thirty-three different sounds. In addition to these, there are the sounds of twenty consonants, of diphthongs and triphthongs. The consonants also vary in sound, according to the word in which they are used, as the hard and soft sound of *c* and of *g*; the soft and the hissing sound of *s*; the soft or flat sound of *x*, like *gx*; the soft and sharp sound of

*th*, as in *this* and *thin* ; the different sounds of the same letters, as in *chaise*, *church* ; and the same sounds of different letters, as in *tion*, *sion* ; in *cial*, *tial*, *sial* ; *cious*, *ceous*, *tious* ; *geous*, *giours*, &c. It would be difficult, and would not compensate for the trouble, to compute the number of different sounds which a good speaker gives to the different letters and combinations of letters in our language, not including the changes of rhetorical emphasis, cadence, and intonation ; but, if analyzed, they would be found to amount to hundreds. Now, how can twenty-six sounds be the elements of hundreds of sounds as elementary as themselves ? Generally speaking, too, before a child begins to learn his letters, he is already acquainted with the majority of elementary sounds in the language, and is in the daily habit of using them in conversation. Learning his letters, therefore, gives him no new sound : it even restricts his attention to a small part of those which he already knows. So far, then, the learning of his letters contracts his practice ; and were it not for keeping up his former habits of speaking, at home and in the play-ground, the teacher, during the six months or year in which he confines him to the twenty-six sounds of the alphabet, would pretty nearly deprive him of the faculty of speech.

But there is another effect of learning the names of the letters first, still more untoward than this. The letter *a*, says Worcester, has seven sounds, as in *fate*, *fat*, *fare*, *far*, *fast*, *fall*, *liar*. In the alphabet, and as a name, it has but one, — the long sound. Now, suppose the words of our language in which this letter occurs to be equally divided among these seven classes. The consequence must be, that, as soon as the child begins to read, he will find one word in which the letter *a* has the sound he has been taught to give it, and six words in which it has a different sound. If, then, he follows the instruction he has received, he goes wrong six times to going right once. Indeed, in running over a score of his most familiar words, — such as *pa*, *ma*, *father*, *apple*, *hat*, *cat*, *rat*, *ball*, *fall*, *call*, *warm*, *swarm*, *man*, *can*, *pan*, *ran*, *brass*, *glass*, *water*, *star*, &c., — he does not

find, in a single instance, that sound of *a* which he has been taught to give it in the alphabet. In an edition of Worcester's Dictionary before me, I find more than three thousand words whose initial letter is *a* ; and yet, amongst all these, there are not a hundred words in which this initial letter has the long or alphabetical sound ; that is, the cases are more than thirty where the young reader would be wrong, if he followed the instruction given him, to one where he would be right. This, surely, is a most disastrous application of the principle, that the elements of a science must be first taught.

The letter *e*, the most frequent vowel in the English language, has five sounds, as in *mete*, *met*, *there*, *her*, *fuel* ; and the remarks above made in relation to the letter *a* apply in nearly their full force to this vowel. So of the rest. *Such* is the facility which learning the names of the letters gives to reading !

In regard to all the vowels, it may be said, not only that, in the very great majority of cases, their sounds when found in words are different from their names as letters, — so that, the more perfectly the child has learned them as letters, the more certain will he be to miscall them in words, — but that these different sounds follow each other in books in the most promiscuous manner. Were there any law of succession among these sounds, so that the short sound of any one vowel should universally follow the long sound ; the obscure, the broad, &c. ; or were one of the sounds used twice in succession, and then another of them once, and so on, following some rule of alternation, — the evil would be greatly mitigated. The sagacious thrower of dice, by retaining in his mind a long series of the throws last made, calculates with some approach to certainty what face will next turn up ; for, in the long-run, the numbers of the different faces turned up will be nearly equal. But no finite power can tell by any calculation according to the doctrine of chances, or by proceeding on the law of exhaustion, what sound of any vowel will next turn up in reading a book of English. There is, too, in the human mind, a faculty corre-

sponding to the law of periodicity, sometimes followed by Nature, so that if an event in Nature happens every other year, or once in seven, or in forty years, the sagacious and philosophic mind penetrates to the law, and grasps it. But the succession of the different vowel-sounds in the English language is as lawless as chaos, and leaves all human acumen or perspicacity in bewilderment.

Did the vowels adhere to their own sounds, the difficulty would be greatly diminished; but not only do the same vowels appear in different dresses, like masqueraders, but, like harlequins, they exchange garbs with each other. How often does *e* take the sound of *a*, as in *there*, *where*, &c.; and *i*, the sound of *e*; and *o*, the sound of *u*; and *u*, the sound of *o*; and *y* and *i* are always changing places.

In one important particular, the consonants are more perplexing than the vowels. The very definition of a consonant, as given in the spelling-books, is, "a letter which has no sound, or only an imperfect one, without the help of a vowel." And yet the definers themselves, and the teachers who follow them, proceed immediately to give a perfect sound to all the consonants. If a consonant has "only an imperfect sound," why, in teaching children to read, should not this imperfect sound be taught them? And again: in giving the names of the consonants, why should the vowel be sometimes prefixed, and sometimes suffixed? In *b*, *c*, *d*, &c., the vowel follows the consonant, as *be*, *ce*, *de*; in *f*, *l*, *m*, &c., the vowel precedes it, as *ef*, *el*, *em*. But, when found in words, the vowel precedes the consonant in the first class of cases as often as it follows it; and, in the latter class of cases, it follows as often as it precedes. The name of the letter *b* is written *be*; but where is the sound of *be* in *ebb*, *web*, *ebony*, *ebullition*, *abode*, *abound*, and in hundreds of other cases? The name of the letter *c* is written *ce*: but, in the first place, *c* is always sounded like *s* or *k*; and, in the second place, where is there any similitude to the sound of *ce* in the words *cap*, *cite*, *cold*, *cube*, *cynic*? Where, too, is the sound of *ce* in words where either of the vowels precedes the

c, as in *accent*, *echo*, *ichthyology*, *occasion*, &c.? The principle of this remark applies to hundreds, probably to thousands, of cases. So, too, if *b* is *be*, then *be* is *bee*, the name of an insect; and if *l* is *el*, then *el* is *eel*, the name of a fish.

The name-sound of the letter *r*, as taught in the alphabet, is *ar*; but where is this sound in all those cases where *r* precedes the vowel in the formation of a syllable or word, as in *rain*, *rest*, *rich*, *rock*, *run*, *rye*? They are not sounded *ar-ain*, *ar-est*, &c.

If such an accumulation of evidence were insufficient to convince any reasonable person, it would be easy to go through with all the letters of the alphabet, and to show, — in regard to the vowels — that, when found in words, they receive only occasionally the sounds which the child is taught always to give them as letters; and, in regard to the consonants, that they never, in any case, receive the sounds which the child is taught to affix to them. I believe it is within bounds to say, that we do not sound the letters, in reading, once in a hundred times, as we were taught to sound them when learning the alphabet. Indeed, were we to do so in one-tenth part of the instances, we should be understood by nobody. What analogy can be pointed out between the rough breathing of the letter *h*, in the words *when*, *where*, *how*, &c., and the name-sound (aytch, aitch, or aych, as it is given by different spelling-book compilers) of that letter as it is taught from the alphabet?

This subject might be further illustrated by reference to other languages, — the Greek, for instance. Will the names of the letters, *kappa*, *omicron*, *sigma*, *mu*, *omicron*, *sigma*, make the word *kosmos*? And yet these letters come as near making that word as those given by the Rev. Mr. Ottiwell Wood, at a late trial in Lancashire, England, did to the sound of his own name. On Mr. Wood's giving his name to the court, the judge said, "Pray, Mr. Wood, how do you spell your name?" to which the witness replied, "O double T, I double U, E double L, double U, double O, D." In the anecdote, it is added that the learned judge at first laid down his pen in astonishment; and then, after

making two or three unsuccessful attempts, declared he was unable to record it. Mr. Palmer, from whose prize essay this anecdote is taken, gives the following account of the manner in which children were taught to read the first sentence in Webster's old spelling-book : *En-o*, no, *emm-ai-en*, man, *emm-ai-wy*, may, *pee-you-tee*, put, *o-double-eff*, off, *tee-aitch-ee*, the, *ell-ai-double-you*, law, *o-eff*, of, *gee-o-dee*, God.

Some defenders of the old system have attempted to find an analogy for their practice in the mode of teaching to sing by first learning the gamut. They compare the notes of the gamut, which are afterwards to be combined into tunes, to the letters of the alphabet to be afterwards combined into words. But one or two considerations will show the greatest difference between the principal case and the supposed analogy. In written music, there is always a scale consisting of at least five lines, and of course with four spaces between, and often one or two lines and spaces above or below the regular scale ; and both the name of a note and the sound to be given it can always be known by observing its place in the scale. To make the cases analogous, there should be a scale of thirty-three places at least for the six vowels only ; and this scale should be enlarged so as to admit the twenty consonants, and all their combinations with the vowels. Such a scale could hardly be crowded into an octavo page. The largest pages now used would not contain more than a single printed line each ; and the matter now contained in an octavo volume would fill the shelves of a good-sized library. If music were taught as unphilosophically as reading, if its eight notes were first arranged in one straight vertical line, to be learned by name, and then transferred to a straight horizontal line, where they should follow each other promiscuously, and without any clew to the particular sound to be given them in each particular place, it seems not too much to say, that not one man in a hundred thousand would ever become a musician.

The comparison sometimes made between reading and arithmetic fails for the same reasons. In arithmetic, the Arabic figures, when standing by themselves, have an invariable value ;

and, when combined, their value is always determined by a certain law of decimal progression. The figure 5 is always five. It may be 5 units, 5 tens, 5 hundreds, &c. ; but it is always five, and whether it is 5 units, 5 tens, or 5 hundreds, is infallibly known by the place it occupies. If we knew that the vowel *a* would always be long if found at the end of a word, that it would be short if found one place to the left, grave if found two, and broad if found three, and so on, there would then be one element of comparison between the cases, and the argument might have, what it now seems to want, a shadow of plausibility.

There is one fact, probably within every teacher's own observation, which should be decisive on this subject. In learning the alphabet, children pronounce the consonants as though they were either preceded or followed by one of the vowels ; that is, they sound *b* as though it were written *be*, and *f* as though written *ef*. But, when they have advanced ever so little way in reading, do they not enunciate words where the letter *b* is followed by one of the *other* vowels, or where it is *preceded* by a vowel, as well as words into which their own familiar sound of *be* enters ? For example, though they have called *b* a thousand times as if it were written *be*, do they not enunciate the words *ball*, *bind*, *box*, *bug*, &c., as well as they do the words *besom*, *beatific*, &c. ? They do not say *be-all*, *be-ind*, *be-ox*, *be-ug*, &c. Do they not articulate the words *ebb*, *web*, &c., where the vowel comes first, or the words *bet*, *bell*, *beyond*, &c., where the vowel is short or obscure, as well as they do those words which have their old accustomed sound of *b*, with the long sound of *e* ? So of the letter *f*, which they have been accustomed to sound as though written *ef*. Do they not articulate the word *fig* as well as they do the first syllable of the word *effigy* ? Nay, except they are very apt, and remember in a remarkable manner the nonsense that has been taught them, do they ever call *fig* ef-ig, or *father*, ef-ather ? Happy incapacity of a bright nature to be turned into a dunce !

The teachers in Prussia and Saxony invariably practise what



is called by them the *lautir* (pronounced *lauteer*) method. In Holland, the same method is universally adopted. With us, it is known by the name *phonic*. It consists in giving each letter, when taken by itself, the sound which it has when found in combination; so that the sound of a regular word of four letters is divided into four parts, and a recombination of the sounds of the letters makes the sound of the word.

There are two reasons why this *lautir* or *phonic* method is less adapted to the English language than to the German: first, because our vowels have more sounds than theirs; and, secondly, because we have more silent letters than they. This is an argument, not against their method of teaching, but in favor of our commencing to teach by giving words before letters. And I despair of any effective improvement in teaching young children to read, until the teachers of our primary schools shall qualify themselves to teach in this manner, — I say, until they shall *qualify* themselves; for they may attempt it in such a rude and awkward way as will infallibly incur a failure. As an accompaniment to this, they should also be able to give instruction according to the *lautir* or *phonic* method. It is only in this way that the present stupefying and repulsive process of learning to read can be changed into one full of interest, animation, and instructiveness, and a toilsome work of months be reduced to a pleasant one of weeks.

Having given an account of the reading-lesson of a primary class just after they had commenced going to school, I will follow it with a brief account of a lesson given to a more advanced class. The subject was a short piece of poetry describing a hunter's life in Missouri. It was first read, the reading being accompanied with appropriate criticisms as to pronunciation, tone, &c. It was then taken up verse by verse, and the pupils were required to give equivalent expressions in prose. The teacher then entered into an explanation of every part of it, in a sort of oral lecture, accompanied with occasional questions. This was done with the greatest minuteness.

Where there was a geographical reference, he entered at large into geography; where a reference to a foreign custom, he compared it with their customs at home: and thus he explained every part, and illustrated the illustrations themselves, until, after an entire hour spent upon six four-line verses, he left them to write out the sentiment and the story in prose, to be produced in school the next morning. All this was done without the slightest break or hesitation, and evidently proceeded from a mind full of the subject, and having a ready command of all its resources.

An account of one more lesson will close what I have to say on the subject of reading. The class, consisting of young lads, belonged to a Burger school, which they were just about leaving. They had been reading a poem of Schiller, — a sort of philosophical allegory, — and, when it was completed, the teacher called upon one of them to give a popular exposition of the meaning of the piece. The lad left his seat, stepped to the teacher's desk, and, standing in front of the school, occupied about fifteen or twenty minutes in an extemporaneous account of the poem, and what he supposed to be its meaning and moral.

#### ARITHMETIC AND MATHEMATICS.

Children are taught to cipher, or, if need be, to count, soon after entering school. I will attempt to describe a lesson which I saw given to a very young class. Blocks of one cube, two cubes, three cubes, &c., up to a block of ten cubes, lay upon the teacher's desk. The cubes on each block were distinctly marked off, and differently colored, — that is, if the first inch or cube was white, the next would be black. The teacher stood by his desk, and in front of the class. He set up a block of one cube, and the class simultaneously said *one*. A block of two cubes was then placed by the side of the first, and the class said *two*. This was done until the ten blocks stood by the side of each other in a row. They were then counted backwards, the teacher placing his finger upon them, as a sig-

nal that their respective numbers were to be called. The next exercise was, "Two comes after one, three comes after two," and so on to ten; and then backwards, "Nine comes before ten, eight comes before nine;" and so of the rest. The teacher then asked, "What is three composed of?"

A. Three is composed of one and two.

Q. Of what else is three composed?

A. Three is composed of three ones.

Q. What is four composed of?

A. Four is composed of four ones, of two and two, of three and one.

Q. What is five composed of?

A. Five is composed of five ones, of two and three, of two twos and one, of four and one.

Q. What numbers compose six? seven? eight? nine? To the latter the pupil would answer, "Three threes make nine; two, three, and four make nine; two, two, and five make nine; three, four, and two make nine; three, five, and one make nine," &c. The teacher then placed similar blocks side by side, while the children added their respective numbers together, "two twos make four," "three twos make six," &c. The blocks were then turned down horizontally to show that three blocks of two cubes each were equal to one of six cubes. Such questions were then asked as, "How many are six less than eight? five less than seven?" &c. Then, "How many are seven and eight?" The answer was given thus: "Eight is one more than seven; seven and seven make fourteen, and one added makes fifteen: therefore eight and seven make fifteen."

Q. How many are six and eight?

A. Eight are two more than six; six and six make twelve, and two added make fourteen. Or it might be thus: Six are two less than eight; eight and eight are sixteen; two taken from sixteen leave fourteen; therefore eight and six are fourteen. They then counted up to a hundred on the blocks. Towards the close of the lesson, such questions as these were put, and readily answered: "Of what is thirty-eight composed?"

A. Thirty-eight is composed of thirty and eight ones, of seven fives and three ones; or sometimes thus, — of thirty-seven and one, of thirty-six and two ones, of thirty-five and three ones, &c.

Q. Of what is ninety composed?

A. Ninety is composed of nine tens, of fifty and forty, &c.

Thus, with a frequent reference to the blocks to keep up attention by presenting an object to the eye, the simple numbers were handled and transposed in a great variety of ways. In this lesson, it is obvious that counting, numeration, addition, subtraction, multiplication, and division were all included; yet there was no abstract rule or unintelligible form of words given out to be committed to memory. Nay, these little children took the first steps in the mensuration of superficies and solids by comparing the length and contents of one block with those of others.

When the pupils were a little farther advanced, I usually heard lessons recited in this way: Suppose 4321 are to be multiplied by 25.\* The pupil says, five times one are five ones, and he sets down 5 in the unit's place; five times two tens, or twenty ones, are a hundred, and sets down a 0 in the ten's place; five times three hundred are one thousand and five hundred, and one hundred to be carried make one thousand six hundred, and sets down a 6 in the hundred's place; five times four thousand are twenty thousand, and one thousand to be carried make twenty-one thousand. The next figure in the multiplier is then taken, — twenty times one are twenty, and a 2 is set down in the ten's place; twenty times two tens are four hundred, and a 4 is set down in the hundred's place; twenty times three hundred are six thousand, and a 6 is set down in the thousand's place; twenty times four thou-

\* Thus: 4321

25

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21605

8642

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108025

sand are eighty thousand, and an 8 is set down in the ten thousand's place. Then come the additions to get the product. Five ones are five, two tens are twenty, and these figures are respectively set down; four hundred and six hundred make a thousand, and a 0 is set down in the hundred's place; one thousand to be carried to six thousand makes seven thousand, and one thousand more makes eight thousand, and an 8 is set down in the thousand's place; eighty thousand and twenty thousand make one hundred thousand, and a 0 is set down in the ten thousand's place, and a 1 in the hundred thousand's place. It is easy to see, that, where the multiplier and multiplicand are large, this process soon passes beyond mere child's play.

So in division. If 32756 are to be divided by 75, the pupil says, How many hundred times are seventy-five, or seventy-five ones, contained in thirty-two thousand and seven hundred, or in thirty-two thousand and seven hundred ones?—four hundred times; and he sets down a 4 in the hundred's place in the quotient; then the divisor seventy-five is multiplied (as before) by the four hundred, and the product is set down under the first three figures of the dividend; and there are two thousand and seven hundred remaining. This remainder is set down in the next line, because seventy-five is not contained in two thousand seven hundred any number of hundred times. And so of the residue of the process.

When there is danger that an advanced class will forget the value of the denominations they are handling, they are required to express the value of each figure in full throughout the whole process, in the manner above described.

I shall never forget the impression which a recitation by a higher class of girls produced upon my mind. It lasted an hour. Neither teacher nor pupil had book or slate. Questions and answers were extemporaneous. They consisted of problems in Vulgar Fractions, simple and compound; in the Rule of Three, Practice, Interest, Discount, &c. A few of the first were simple; but they soon increased in complication and diffi-

culty, and in the amount of the sums managed, until I could hardly credit the report of my own senses, so difficult were the questions, and so prompt and accurate the replies.

A great many of the exercises in arithmetic consisted in reducing the coins of one State to those of another. In Germany, there are almost as many different currencies as there are States; and the expression of the value of one coin in other denominations is a very common exercise.

It struck me that the main differences between their mode of teaching arithmetic and ours consist in their beginning earlier, continuing the practice in the elements much longer, requiring a more thorough analysis of all questions, and in not separating the processes, or rules, so much as we do from each other. The pupils proceed less by rule, more by an understanding of the subject. It often happens to our children, that, while engaged in one rule, they forget a preceding. Hence many of our best teachers have frequent reviews. But there, as I stated above, the youngest classes of children were taught addition, subtraction, multiplication, and division, promiscuously. And so it was in the later stages. The mind was constantly carried along, and the practice enlarged in more than one direction. It is a difference which results from teaching, in the one case, from a book; and, in the other, from the head. In the latter case, the teacher sees what each pupil most needs, and, if he finds any one halting or failing on a particular class of questions, plies him with questions of that kind until his deficiencies are supplied.

In algebra, trigonometry, surveying, geometry, &c., I invariably saw the teacher standing before the blackboard, drawing the diagrams, and explaining all the relations between their several parts, while the pupils in their seats, having a pen and a small manuscript book, copied the figures, and took down brief heads of the solution; and at the next recitation they were required to go to the blackboard, draw the figures and solve the problems themselves. How different this mode of hearing a lesson from that of holding the text-book in the left

hand, while the fore-finger of the right carefully follows the printed demonstration, under penalty, should the place be lost, of being obliged to recommence the solution !

#### GRAMMAR AND COMPOSITION.

Great attention is paid to grammar, or, as it is usually called in the plan of studies, the German language. But I heard very little of the ding-dong and recitative of gender, number, and case, of government and agreement, which make up so great a portion of the grammatical exercises in our schools, and which the pupils are often required to repeat until they really lose all sense of the original meaning of the terms they use. Of what service is it for children to re-iterate and re-assert, fifty times in a single recitation, the gender and number of nouns, about which they never made a mistake even before a grammar book was put into their hands? If the object of grammar is to teach children to speak and write their native language with propriety, then they should be practised upon expressing their own ideas with elegance, distinctness, and force. For this purpose, their common every-day phraseology is first to be attended to. As their speech becomes more copious, they should be led to recognize those slight shades of distinction which exist between words almost synonymous ; to discriminate between the literal and the figurative ; and to frame sentences in which the main idea shall be brought out conspicuously and prominently, while all subordinate ones — mere matters of circumstance or qualification — shall occupy humbler or more retired positions. The sentences of some public speakers are so arranged, that what is collateral or incidental stands out boldly in the foreground, while the principal thought is almost lost in the shade, — an arrangement as preposterous as if in the senate-chamber, the forum, or the parade-ground, the president, the judge, or the commanding officer, were thrust into the rear, while a nameless throng of non-officials and *incognitos* should occupy the places of dignity and

authority. Grammar should be taught in such a way as to lead out into rhetoric as it regards the form of the expression, and into logic as it regards the sequence and coherency of the thoughts. If this is so, then no person is competent to teach grammar who is not familiar, at least, with all the leading principles of rhetoric and logic.

The Prussian teachers, by their constant habit of conversing with the pupils ; by requiring a complete answer to be given to every question ; by never allowing a mistake in termination or in the collocation of words or clauses to pass uncorrected, nor the sentence, as corrected, to pass unrepeated ; by requiring the poetry of the reading-lessons to be changed into oral or written prose, and the prose to be paraphrased, or expressed in different words ; and by exacting a general account or summary of the reading-lessons, — are, as we may almost literally say, constantly teaching grammar, or, as they more comprehensively call it, the German language. It is easy to see that composition is included under this head ; the writing of regular “ essays ” or “ themes ” being only a later exercise.

Professor Stowe gives the following account of the manner of teaching and explaining the different parts of speech : —

“ Grammar is taught directly and scientifically, yet by no means in a dry and technical manner. On the contrary, technical terms are carefully avoided, till the child has become familiar with the nature and use of the things designated by them, and he is able to use them as the names of ideas which have a definite existence in his mind, and not as awful sounds dimly shadowing forth some mysteries of science into which he has no power to penetrate.

“ The first object is to illustrate the different parts of speech, such as the noun, verb, adjective, adverb ; and this is done by engaging the pupil in conversation, and leading him to form sentences in which the particular part of speech to be learned shall be the most important word, and directing his attention to the nature and use of the word in the place where he uses it. For example, let us suppose the nature and use of the ad-



verb is to be taught: the teacher writes upon the blackboard the words *here, there, near, &c.* He then says, 'Children, we are all together in this room. By which of the words on the blackboard can you express this?'

"*Children.* 'We are all *here.*'"

"*Teacher.* 'Now look out of the window, and see the church. What can you say of the church with the second word on the blackboard?'

"*Children.* 'The church is *there.*'"

"*Teacher.* 'The distance between us and the church is not great: how will you express this by a word on the blackboard?'

"*Children.* 'The church is *near.*' The fact that these different words express the same sort of relations is then explained, and, accordingly, that they belong to the same class, or are the same part of speech. The variations of these words are next explained.

"*Teacher.* 'Children, you say the church is *near*; but there is a shop between us and the church: what will you say of the shop?'

"*Children.* 'The shop is *nearer.*'"

"*Teacher.* 'But there's a fence between us and the shop. Now, when you think of the distance between us, the shop, and the fence, what will you say of the fence?'

"*Children.* 'The fence is *nearest.*' So of other adverbs. The lark sings *well.* Compare the singing of the lark with that of the canary-bird. Compare the singing of the nightingale with that of the canary-bird."

I heard excellent lessons on the different meanings which roots, or primitive words, assume, when used with different affixes or suffixes. An analogous lesson in our language would consist in giving the meanings of the different words which come from one root in the Latin; as, *convene, intervene, prevent, event, advent, &c.*; or *accede, recede, succeed, exceed, proceed, secede, precede, intercede, &c.*

## WRITING AND DRAWING.

Such excellent hand-writing as I saw in the Prussian schools I never saw before. I can hardly express myself too strongly on this point. In Great Britain, France, or in our own country, I have never seen any schools worthy to be compared with theirs in this respect. I have before said that I found all children provided with a slate and pencil, and writing or printing letters, and beginning with the elements of drawing, either immediately or very soon after they entered school. This furnishes the greater part of the explanation of their excellent hand-writing. A part of it, I think, should be referred to the peculiarity of the German script, which seems to me to be easier than our own. But, after all due allowance is made for this advantage, a high degree of superiority over the schools of other countries remains to be accounted for. This superiority cannot be attributed in any degree to a better manner of holding the pen; for I never saw so great a proportion of cases in any schools where the pen was so awkwardly held. This excellence must be referred, in a great degree, to the universal practice of learning to draw contemporaneously with learning to write. I believe a child will learn both to draw and to write sooner and with more ease than he will learn writing alone; and for this reason, — the figures or objects contemplated and copied in learning to draw are larger, more marked, more distinctive one from another, and more sharply defined with projection, angle, or curve, than the letters copied in writing. In drawing, there is more variety; in writing, more sameness. Now, the objects contemplated in drawing, *from their nature*, attract attention more readily, impress the mind more deeply, and, of course, will be more accurately copied, than those in writing. And when the eye has been trained to observe, to distinguish, and to imitate, in the first exercise, it applies its habits with great advantage to the second.

Another reason is, that the child is taught to draw things with which he is familiar, which have some significance, and

give him pleasing ideas. But a child who is made to fill page after page with rows of straight marks, that look so blank and cheerless, though done ever so well, has and can have no pleasing associations with his work. The practice of beginning with making inexpressive marks, or with writing unintelligible words, bears some resemblance, in its lifelessness, to that of learning the alphabet. Each exhales torpor and stupidity to deaden the vivacity of the worker.

Again: I have found it an almost universal opinion with teachers of the art of writing, that children should commence with large hand rather than with fine. The reason for this I suppose to be, that, where the letters themselves are larger, their differences and peculiarities are proportionally larger; hence they can be more easily discriminated, and discrimination must necessarily precede exact copying. So to speak, the child becomes acquainted with the physiognomy of the large letters more easily than with that of the small. Besides, the formation of the larger gives more freedom of motion to the hand. Now, in these respects, there is more difference between the objects used in drawing and the letters of a large hand than between the latter and fine hand; and therefore the argument in favor of a large hand applies with still more force in favor of drawing.

In the course of my tour, I passed from countries where almost every pupil in every school could draw with ease, and most of them with no inconsiderable degree of beauty and expression, to those where less and less attention was paid to the subject; and, at last, to schools where drawing was not practised at all: and, after many trials, I came to the conclusion that, with no other guide than a mere inspection of the copy-books of the pupils, I could tell whether drawing were taught in the school or not; so uniformly superior was the hand-writing in those schools where drawing was taught in connection with it. On seeing this, I was reminded of that saying of Pestalozzi, — somewhat too strong, — that, “without drawing, there can be no writing.”

But suppose it were otherwise, and that learning to draw retarded the acquisition of good penmanship, how richly would the learner be compensated for the sacrifice! Drawing, of itself, is an expressive and beautiful language. A few strokes of the pen or pencil will often represent to the eye what no amount of words, however well chosen, can communicate. For the master-architect, for the engraver, the engineer, the pattern-designer, the draughtsman, moulder, machine-builder, or head mechanic of any kind, all acknowledge that this art is essential and indispensable. But there is no department of business or condition in life where the accomplishment would not be of utility. Every man should be able to plot a field, to sketch a road or a river, to draw the outlines of a simple machine, a piece of household furniture or a farming utensil, and to delineate the internal arrangement or construction of a house.

But to be able to represent by lines and shadows what no words can depict is only a minor part of the benefit of learning to draw. The study of this art develops the talent of observing even more than that of delineating. Although a man may have but comparatively few occasions to picture forth what he has observed, yet the power of observation should be cultivated by every rational being. The skilful delineator is not only able to describe far better what he has seen, but he sees twice as many things in the world as he would otherwise do. To one whose eye has never been accustomed to mark the form, color, or peculiarities of objects, all external Nature is enveloped in a haze, which no sunshine, however bright, will ever dissipate. The light which dispels this obscurity must come from within. Teaching a child to draw, then, is the development in him of a new talent, — the conferring upon him, as it were, of a new sense, — by means of which he is not only better enabled to attend to the common duties of life, and be more serviceable to his fellow-men, but he is more likely to appreciate the beauties and magnificence of Nature which everywhere reflect the glories of the Creator into his soul. When accompanied by

appropriate instruction of a moral and religious character, this accomplishment becomes a quickener to devotion.

With the inventive genius of our people, the art of drawing would be eminently useful. They would turn it to better account than any other people in the world. We now perform far the greater part of our labor by machinery. With the high wages prevalent amongst us, if such were not the case, our whole community would be impoverished. Whatever advances the mechanic and manufacturing arts, therefore, is especially important here; and whatever is important for men to know, as men, should be learned by children in the schools.

But whatever may be said of the importance of this art, as it regards the community at large, its value to a school-teacher can hardly be estimated.

If the first exercises in reading were taught as they should be; if the squares of the multiplication-table were first to be drawn on the blackboard, and then to be filled up by the pupils as they should see on what reason the progressive increase of the numbers is founded; if geography were taught from the beginning, as it should be, by constant delineations upon the blackboard, — then every teacher, even of the humblest school, ought to be acquainted with the art of linear drawing, and be able to form all the necessary figures and diagrams not only with correctness, but with rapidity. And in teaching navigation, surveying, trigonometry, geometry, &c.; in describing the mechanical powers; in optics, in astronomy, in the various branches of natural philosophy, and especially in physiology, — the teacher who has a command of this art will teach incomparably better and incomparably faster than if he were ignorant of it. I never saw a teacher in a German school make use of a ruler, or any other mechanical aid, in drawing the nicest or most complicated figures. I recollect no instance in which he was obliged to efface a part of a line because it was too long, or to extend it because it was too short. If squares or triangles were to be formed, they came out squares or tri-

angles without any overlapping or deficiency. Here was not only much time gained or saved, but the pupils had constantly before their eyes these examples of celerity and perfectness as models for imitation. No one can doubt how much more correctly, as well as more rapidly, a child's mind will grow in view of such models of ease and accuracy, than if only slow, awkward, and clumsy movements are the patterns constantly held before it.

I saw hand-writing taught in various ways. The most common mode for young children was that of writing on the black-board for their imitation. In such cases, the copy was always beautifully written, and the lesson preceded by instructions and followed by corrections.

Another method which has had some currency in Germany is this: If the mark to be copied is a simple straight line, thus, *//*, the teacher says, *one, one*, as words of command; and, at each enunciation of the word, the pupils make a mark simultaneously. The teacher accelerates or retards his utterance according to the degree of facility the class has acquired. If the figure to be copied consists of an upward and downward stroke, thus, *7, 7*, the teacher says, *one, two; one, two* (one for the upward, the other for the downward motion of the hand); at first slowly, afterwards more rapidly. When the figure consists of three strokes, thus, *2*, he pronounces *one, two, three*, as before. Letters are formed in the same way.

A supposed advantage of this method consists in its retarding the motions of those who would otherwise write too fast, and hastening those who would write too slow. But, for these purposes, the teacher must see that all keep time, otherwise the advantage is lost. And, on the whole, there is so much difference between the natural quickness of perception and of motion in different pupils, that there can be no such thing as a universal standard. Some scholars, whose thoughts and muscles are of electric speed, would be embarrassed by being obliged to write slowly; and others could not keep step, though the music played only common time. Neither in their physical nor in

their spiritual natures does the speed of children seem to have been graduated by any one clock.

The best method which I have ever seen of teaching penmanship to large scholars was that practised by Professor Newman, at the Normal School in Barre.\*

In the schools I saw, orthography, punctuation, and the use of capitals, were early connected with the exercise of writing.

#### GEOGRAPHY.

In describing the manner in which geography was taught, I must use discrimination; for, in some respects, it was taught imperfectly, in others pre-eminently well.

The practice seemed to be uniform, however, of beginning with objects perfectly familiar to the child, — the schoolhouse with the grounds around it, the home with its yards or gardens, and the street leading from the one to the other. First of all, the children were initiated into the ideas of space, without which we can know no more of geography than we can of history without ideas of time. Mr. Carl Ritter of Berlin — probably the greatest geographer now living — expressed a decided opinion to me, that this was the true mode of beginning.

Children, too, commence this study very early, — soon after entering school, — but no notions are given them which they are not perfectly able to comprehend, reproduce, and express.

I found geography taught almost wholly from large maps suspended against the walls, and by delineations on the black-board. And here the skill of teachers and pupils in drawing did admirable service. The teacher traced the outlines of a country on the suspended map, or drew one upon the black-board, accompanying the exhibition by an oral lecture; and, at the next recitation, the pupils were expected to repeat what they had seen and heard. And in regard to the natural divisions of the earth, or the political boundaries of countries, a pupil was not considered as having given any proof that he

\* See Common-school Journal, 2d vol., p. 345.

had a correct image in his mind, until he could go to the black-board, and reproduce it from the ends of his fingers. I witnessed no lesson unaccompanied by these tests.

I will describe, as exactly as I am able, a lesson which I heard given to a class a little advanced beyond the elements; remarking, that, though I heard many lessons given on the same plan, none of them were signalized by the rapidity and effect of the one I am about to describe.

The teacher stood by the blackboard, with the chalk in his hand. After casting his eye over the class to see that all were ready, he struck at the middle of the board. With a rapidity of hand which my eye could hardly follow, he made a series of those short, divergent lines, or shadings, employed by map-engravers to represent a chain of mountains. He had scarcely turned an angle, or shot off a spur, when the scholars began to cry out, "Carpathian Mountains, Hungary; Black-forest Mountains, Wurtemberg; Giant's Mountains (Riesen-Gebirge), Silesia; Metallic Mountains (Erz-Gebirge), Pine Mountains (Fichtel-Gebirge), Central Mountains (Mittel-Gebirge), Bohemia," &c.

In less than half a minute, the ridge of that grand central elevation which separates the waters that flow north-west into the German Ocean from those that flow north into the Baltic, and south-east into the Black Sea, was presented to view, — executed almost as beautifully as an engraving. A dozen crinkling strokes, made in the twinkling of an eye, represented the head-waters of the great rivers which flow in different directions from that mountainous range; while the children, almost as eager and excited as though they had actually seen the torrents dashing down the mountain-sides, cried out, "Danube, Elbe, Vistula, Oder," &c. The next moment I heard a succession of small strokes, or taps, so rapid as to be almost indistinguishable; and hardly had my eye time to discern a large number of dots made along the margins of the rivers, when the shout of "Lintz, Vienna, Prague, Dresden, Berlin," &c., struck my ear. At this point in the exercise, the spot which



had been occupied on the blackboard was nearly a circle, of which the starting-point, or place where the teacher first began, was the centre ; but now a few additional strokes around the circumference of the incipient continent extended the mountain ranges outwards towards the plains, — the children responding the names of the countries in which they respectively laid. With a few more flourishes, the rivers flowed onwards towards their several terminations ; and, by another succession of dots, new cities sprang up along their banks. By this time, the children had become as much excited as though they had been present at a world-making. They rose in their seats, they flung out both hands, their eyes kindled, and their voices became almost vociferous as they cried out the names of the different places, which, under the magic of the teacher's crayon, rose into view. Within ten minutes from the commencement of the lesson, there stood upon the blackboard a beautiful map of Germany, with its mountains, principal rivers and cities, the coast of the German Ocean, the Baltic and the Black Seas ; and all so accurately proportioned, that I think only slight errors would have been found, had it been subjected to the test of a scale of miles. A part of this time was taken up in correcting a few mistakes of the pupils ; for the teacher's mind seemed to be in his ear as well as in his hand ; and, notwithstanding the astonishing celerity of his movements, he detected erroneous answers, and turned round to correct them. The rest of the recitation consisted in questions and answers respecting productions, climate, soil, animals, &c.

Many of the cosmogonists suppose, that after the creation of the world, and when its whole surface was as yet fluid, the solid continents rose gradually from beneath the sea ; first the loftiest peaks of the Andes, for instance, emerged from the deep, and, as they reached a higher and a higher point of elevation, the rivers began to flow down their sides, until, at last, — the lofty mountains having attained their height, the mighty rivers their extent and volume, and the continent its amplitude, — cultivation began, and cities and towns were built. The lesson

I have described was a beautiful illustration of that idea, with one advantage over the original scene itself, — that the spectator had no need of waiting through all the geological epochs to see the work completed.

Compare the effect of such a lesson as this, both as to the amount of the knowledge communicated, and the vividness, and of course the permanence, of the ideas obtained, with a lesson where the scholars look out a few names of places on a lifeless atlas, but never send their imaginations abroad over the earth; and the teacher sits listlessly down before them to interrogate them from a book, in which all the questions are printed at full length, to supersede on his part all necessity of knowledge.

Thoroughly and beautifully as I saw some departments of geography taught in the common schools of Prussia, traced out into their connections with commerce, manufactures, and history, I found but few of this class of schools in which *universal* geography could, with any propriety, be considered as a part of the course. The geography of their own country was minutely investigated. That of the western hemisphere was very little understood. But this should be said, that, as far as they professed to teach, they taught thoroughly and well.\*

\* The Germans seem to me to be the best map-engravers in the world. Their maps are at once beautiful and cheap. To show to what an extraordinary length they have gone in representing the results of science to the eye, I subjoin the titles of several maps which have been prepared by that distinguished artist, Professor Berghaus of Potsdam.

Map illustrating the diffusion of heat over the surface of Europe.

Map of the Atlantic Ocean, showing the currents, the great commercial thoroughfares, the diffusion of heat, banks, and portions of the bottom of the sea, &c.

Map of the Pacific Ocean, its currents, thoroughfares, and temperature.

Map representing the lines of equal intensity of magnetic power (*isodynamic* lines), according to the observations made between 1790 and 1830.

Map of Humboldt's system of isothermal curves.

Map of tides.

Map of the German Ocean, with the neighboring parts of the Atlantic, its tides, and the state of the bed of the sea.

Map of the volcanic bands, and the central groups of the Pacific.

Map. — Sketch of the geographical distribution of plants. Spread of plants in a perpendicular direction. Principal circumstances affecting the spread of vegetation. Relative curves of monocotyledonous and dicotyledonous plants on the

**EXERCISES IN THINKING. — KNOWLEDGE OF NATURE. — KNOWLEDGE OF THE WORLD. — KNOWLEDGE OF SOCIETY.**

In the "Study-Plans" of all the schools in the north of Prussia, I found most, and, in some of them, all, of the above

Swiss Alps. Graphic statistics of particular families of plants. Outlines of some forms of plants.

Map of isothermal curves of the northern hemisphere.

Map. — General view of mean barometrical heights near the seashore, and the variation of the weight of the atmosphere.

Map of German rivers, — the Rhine, Elbe, and Oder.

Map. — View of the distribution of the solid and fluid parts of the earth; also of the variety in the form of surface, &c.

Map of isodynamic lines in the horizontal projection, for the average point of the meridian of Paris, and of the parallels 60° of north and south latitude.

Map of the mean of the temperature upon the whole earth, founded upon observations in three hundred and seven places. Graphic description of the course of temperature, for daily and yearly periods, in all zones.

Map. — Currents of air on the North Atlantic Ocean to the western part of the Old and to the eastern part of the New World.

Map. — Hydro-historic survey of the state of the Oder in the half-century from 1781 to 1839.

Map. — Survey of the spread of the most important cultivable trees and shrubs, &c.

Map of the volcanic appearances of the Old World in and around the Atlantic Ocean.

Map of the "specialia" of the volcanic band of the Atlantic Ocean.

Map. — Circles of the spread of the most important cultivable growths, and also a notice of the course of the isotherms and isochimenes (or places which show the same degree of heat in summer and of cold in winter).

Map of the tabular representation of the statistics of the vegetable kingdom in Europe.

Map. — Botanic, geographic, statistic map of Europe.

Map of winds for all the earth.

Map, physical, of the Indian Ocean.

Map of the volcanic kingdom of Guatemala, the Isthmus of Tehuantepec, Nicaragua, and Panama, and the central volcano of the Southern Ocean.

Map of the variations of the magnetic meridians and parallels, &c.

Map. — Survey of the proportions of rain in Europe.

Map. — Survey of the meteorological stations in Germany, Switzerland, the Netherlands, &c.

Map of the ideal profile of a part of the earth's rind with the plants and animals drawn by Joseph Fisher, according to the selection and arrangement of Dr. Buckland.

Map. — Botanic map of Germany, containing statistics of the most distinguished families of plants.

Map. — Hylotographic (*description of rain*) map of the earth.

Map. — Hylomarisich (*denoting the quantity of dampness in the atmosphere*) observations.

subjects of lessons. To each was assigned its separate hour and place in the routine of exercises. For brevity's sake, however, and because the topics naturally run into each other, I shall attempt to describe them together.

These lessons consisted of familiar conversations between teacher and pupils, on subjects adapted to the age, capacities, and proficiency of the latter. With the youngest classes, things immediately around them, — the schoolroom, and the materials of which it had been built; its different parts, as foundation, floor, walls, ceiling, roof, windows, doors, fire-place; its furniture and apparatus; its books, slates, paper; the clothes of the pupils, and the materials from which they were made; their food and playthings; the duties of children to animals, to each other, to their parents, neighbors, to the old, to their Maker, — these are specimens of a vast variety of subjects embraced under one or another of the above heads. As the children advanced in age and attainments, and had acquired full and definite notions of the visible and tangible existences around them, and also of time and space, so that they could understand descriptions of the unseen and the remote, the scope of these lessons was enlarged, so as to take in the different kingdoms of Nature, the arts, trades, and occupations of men, and the more complicated affairs of society.

When visiting the schools in Leipsic, I remarked to the superintendent, that most accomplished educationist, Dr. Vogel, that I did not see on the "Study-Plan" of his schools the title "Exercises in Thinking." His reply was, "No; for I con-

Map. — The warm currents of the Atlantic and the cold stream of the Pacific, in parallels represented according to geographical situation and extent.

Map of Asia and Europe in reference to running waters, and their distribution into river-basins (Gebiete).

Map. — Comparative survey of the state of the Rhine, the Weser, the Elbe, and the Oder, from 1831 to 1840.

Map. — Geographic extent of thunder-storms in Europe.

Map. — River-basins of the New World.

Map. — Macclstrom, &c.

Map. — Mountain-chains in Asia and Europe.

Map. — Great mountain system of Europe.

Map. — Mountain-chains in North America.

sider it a *sin* in any teacher not to lead his pupils to think in regard to all the subjects he teaches." He did not call it an omission, or even a disqualification, in a teacher, if he did not awaken thought in the minds of his pupils; but he peremptorily denounced it as a "*sin*." "Alas!" thought I, "what expiation will be sufficient for many of us who have had charge of the young!"

It is obvious, from the account I have given of these primary lessons, that there is no restriction as to the choice of subjects, and no limits to the extent of information that may be ingrafted upon them. What more natural than that a kind teacher should attempt to gain the attention and win the good-will of an active, eager-minded boy just entering his school, by speaking to him about the domestic animals which he plays with, or tends at home? — the dog, the cat, the sheep, the horse, the cow. Yet, without any interruption or overleaping of natural boundaries, this simple lesson may be expanded into a knowledge of all quadrupeds, their characteristics and habits of life, the uses of their flesh, skins, fur, bones, horns or ivory, the parts of the world where they live, &c. So if a teacher begins to converse with a boy about domestic fowls, there is no limit, save in his own knowledge, until he has exhausted the whole subject of ornithology, — the varieties of birds, their plumage, their uses, their migratory habits, &c. What more natural than that a benevolent teacher should ask a blushing little girl about the flowers in her vases or garden at home? and yet, this having been done, the door is opened that leads to all botanical knowledge, — to the flowers of all the seasons and all the zones, to the trees cultivated by the hand of man, or the primeval forests that darken the face of continents. Few children go to school who have not seen a fish, — at least a minnow in a pool. Begin with this, and Nature opposes no barrier until the wonders of the deep are exhausted. Let the schoolhouse, as I said, be the first lesson; and, to a mind replenished with knowledge, not only all the different kinds of edifices — the dwelling-house, the church, the court-house, the

palace, the temple — are at once associated, but all the different orders of architecture — Corinthian, Ionic, Doric, Egyptian, Gothic, &c. — rise to the view. How many different materials have been brought together for the construction of the schoolhouse! — stone, wood, nails, glass, bricks, mortar, paints, materials used in glazing, &c. Each one of these belongs to a different department of Nature; and, when an accomplished teacher has once set foot in any one of these provinces, he sees a thousand interesting objects around him, as it were, soliciting his attention. Then each one of these materials has its artificer; and thus all the mechanical trades may be brought under consideration, — the house-builder's, the mason's, the plumber's, the glazier's, the locksmith's, &c. A single article may be viewed under different aspects, — as, in speaking of a lock, one may consider the nature and properties of iron, its cohesiveness, malleability, &c., its utility, or the variety of utensils into which it may be wrought; or the conversation may be turned to the particular object and uses of the lock, and upon these a lesson on the rights of property, the duty of honesty, the guilt of theft and robbery, &c., be ingrafted. So, in speaking of the beauties and riches and wonders of Nature, — of the revolution of the seasons, the glory of spring, the exuberance of autumn, the grandeur of the mountain, the magnificence of the firmament, — the child's mind may be turned to a contemplation of the power and goodness of God. I found these religious aspects of Nature to be most frequently adverted to, and was daily delighted with the reverent and loving manner in which the name of the Deity was always spoken: "*Der liebe Gott*," "*The dear God*," was the universal form of expression; and the name of the Creator of heaven and earth was hardly ever spoken without this epithet of endearment.

It is easy also to see that a description of the grounds about the schoolhouse or the paternal mansion, and of the road leading from one of these places to the other, is the true starting-point of all geographical knowledge; and, this once begun, there is no terminus, until all modern and ancient geography,

and all travels and explorations by sea and land, are exhausted. So the boy's nest of marbles may be the nucleus of all mineralogy; his top, his kite, his little wind-wheel or water-wheel, the salient point of all mechanics and technology; and the stories he has heard about the last king or the aged king, the first chapter in universal history.

I know full well that the extent and variety of subjects said to be taught to young children in the Prussian schools have been often sneered at.

In a late speech, made on a public occasion, by one of the distinguished politicians in our country, the idea of teaching the natural sciences in our common schools was made a theme for ridicule. Let it be understood in what manner an accomplished teacher may impart a great amount of useful knowledge on these subjects, and perhaps awaken minds which may hereafter adorn the age, and benefit mankind by their discoveries, and it will be easily seen to which party the ridicule most justly attaches. "What," say the objectors, "teach children botany, and the unintelligible and almost unspeakable names, monandria, diandria, triandria, &c.? or zoölogy, with such technical terms as mollusca, crustacea, vertebrata, mammalia, &c.? the thing is impossible!" The Prussian children are not thus taught. For years, their lessons are free from all the technicalities of science. The knowledge they already possess about common things is made the nucleus around which to collect more; and the language with which they are already familiar becomes the medium through which to communicate new ideas, and by which, whenever necessary, to explain new terms. There is no difficulty in explaining to a child seven years of age the distinctive marks by which Nature intimates to us, at first sight, whether a plant is healthful or poisonous; or those by which, on inspecting the skeleton of an animal that lived thousands of years ago, we know whether it lived upon grass or grain or flesh. It is in this way that the pupil's mind is carried forward by an actual knowledge of things, until the time arrives for giving him classifications and nomenclatures.

When a child knows a great many particular or individual things, he begins to perceive resemblances between some of them; and they then naturally assort themselves, as it were, in his mind, and arrange themselves into different groups. Then, by the aid of a teacher, he perfects a scientific classification among them; bringing into each group all that belong to it. But soon the number of individuals in each group becomes so numerous, that he wants a cord to tie them together, or a vessel in which to hold them. Then, from the nomenclature of science, he receives a name which binds all the individuals of that group into one ever afterwards. It is now that he perceives the truth and the beauty of classification and nomenclature. An infant that has more red and white beads than it can hold in its hands, and, to prevent them from rolling about the floor and being lost, collects them together, putting the white in one cup and the red in another, and sits and smiles at its work, has gone through with precisely the same description of mental process that Cuvier and Linnæus did when they summoned the vast varieties of the animal and vegetable kingdoms into their spiritual presence, and commanded the countless hosts to arrange themselves into their respective genera, orders, and species.

*Our* notions respecting the expediency or propriety of introducing the higher branches, as they are called, into our common schools, are formed from a knowledge of our own school-teachers, and of the habits that prevail in most of the schools themselves. With us, it too often happens, that if a higher branch—geometry, natural philosophy, zoölogy, botany—is to be taught, both teacher and class must have text-books. At the beginning of these text-books, all the technical names and definitions belonging to the subject are set down. These, before the pupil has any practical idea of their meaning, must be committed to memory. The book is then studied, chapter by chapter. At the bottom of each page, or at the ends of the sections, are questions printed at full length. At the recitations, the teacher holds on by these leading-strings. He intro-



duces no collateral knowledge. He exhibits no relation between what is contained in the book and other kindred subjects, or the actual business of men and the affairs of life. At length, the day of examination comes. The pupils rehearse from memory with a suspicious fluency; or being asked for some useful application of their knowledge, some practical connection between that knowledge and the concerns of life, they are silent, or give some ridiculous answer, which at once disparages science, and gratifies the ill-humor of some ignorant satirist. Of course, the teaching of the higher branches falls into disrepute in the minds of all sensible men, as, under such circumstances, it ought to do. But the Prussian teacher has no book. He needs none. He teaches from a full mind. He cumbers and darkens the subject with no technical phraseology. He observes what proficiency the child has made, and then adapts his instructions, both in quality and amount, to the necessity of the case. He answers all questions. He solves all doubts. It is one of his objects at every recitation, so to present ideas that they shall start doubts and provoke questions. He connects the subject of each lesson with all kindred and collateral ones, and shows its relations to the every-day duties and business of life; and should the most ignorant man or the most destitute vagrant in society ask him "of what use such knowledge can be," he will prove to him, in a word, that some of his own pleasures or means of subsistence are dependent upon it, or have been created or improved by it.

In the mean time, the children are delighted. Their perceptive powers are exercised. Their reflecting faculties are developed. Their moral sentiments are cultivated. All the attributes of the mind within find answering qualities in the world without. Instead of any longer regarding the earth as a huge mass of dead matter, without variety and without life, its beautiful and boundless diversities of substance, its latent vitality and energies, gradually dawn forth, until, at length, they illuminate the whole soul, challenging its admiration for their utility, and its homage for the bounty of their Creator.

There are other points pertaining to the qualification of teachers, which would, perhaps, strike a visitor or spectator more strongly than the power of giving the kind of lessons I have described; but probably there is nothing, which, at the distance of four thousand miles, would give to a reader or hearer so adequate an idea of intelligence and capacity as a full understanding of the scope and character of this class of exercises. Suppose, on the one hand, a teacher to be introduced into a school, who is competent to address children on this great range and variety of subjects, and to address them in such a manner as to arouse their curiosity, command their attention, and supply them not only with knowledge, but with an inextinguishable love for it; suppose such a teacher to be able to give one, and sometimes two such lessons a day, — that is, from two hundred to four hundred lessons in a year, — to the same class, and to carry his classes, in this way, through their eight years' schooling. On the other hand, suppose a young man coming fresh from the plough, the workshop, or the anvil, or, what is no better, from Greek and Latin classics; and suppose his knowledge on the above-enumerated subjects to be divided into four hundred, or even into two hundred parts, and that only one two-hundredth portion of that stock of knowledge should be administered to the children in a day. Let us suppose all this, and we shall have some more adequate idea of the different advantages of children, at the present time, in different parts of the world. In Prussia, the theory, and the practice under it, are, not that three years' study under the best masters qualifies a talented and devoted man to become a teacher, but that three years of such *general* preparation may qualify one for that *particular* and *daily* preparation which is to be made before meeting a class in school. And a good Prussian teacher no more thinks of meeting his classes without this daily preparation than a distinguished lawyer or clergyman amongst ourselves would think of managing a cause before court and jury, or preaching a sermon, without special reading and forethought.

It is easy to see, from the above account, how such a variety of subjects can be taught simultaneously in school, without any interference with each other; nay, that the "common bond," which, as Cicero said, binds all sciences together, should only increase their unity as it enlarges their number.

#### BIBLE HISTORY AND BIBLE KNOWLEDGE.

Nothing receives more attention in the Prussian schools than the Bible. It is taken up early, and studied systematically. The great events recorded in the Scriptures of the Old and New Testament; the character and lives of those wonderful men, who, from age to age, were brought upon the stage of action, and through whose agency the future history and destiny of the race were to be so much modified; and especially those sublime views of duty and of morality which are brought to light in the gospel, — these are topics of daily and earnest inculcation in every school. To these, in some schools, is added the history of the Christian religion, in connection with contemporary civil history. So far as the Bible lessons are concerned, I can ratify the strong statements made by Professor Stowe in regard to the absence of sectarian instruction, or endeavors at proselytism. The teacher, being amply possessed of a knowledge of the whole chain of events, and of all biographical incidents, and bringing to the exercise a heart glowing with love to man, and with devotion to his duty as a former of the character of children, has no necessity or occasion to fall back upon the formulas of a creed. It is when a teacher has no knowledge of the wonderful works of God, and of the benevolence of the design in which they were created; when he has no power of explaining and applying the beautiful incidents in the lives of prophets and apostles, and, especially, the perfect example which is given to men in the life of Jesus Christ: it is then, that, in attempting to give religious instruction, he is, as it were, constrained to recur again and again to the few words or sentences of his form of faith,

whatever that faith may be ; and, therefore, when giving the second lesson, it will be little more than a repetition of the first ; and the two-hundredth lesson, at the end of the year, will differ from that at the beginning, only in accumulated wearisomeness and monotony.

There are one or two facts, however, which Professor Stowe has omitted to mention, and without a knowledge of which, one would form very erroneous ideas respecting the character of some of the religious instruction in the Prussian schools. In all the Protestant schools, Luther's Catechism is regularly taught ; and, in all the Roman-Catholic schools, the catechism of that communion. When the schools are mixed, they have combined literary with separate religious instruction ; and here all the doctrines of the respective denominations are taught early and most assiduously. I well remember hearing a Roman-Catholic priest inculcating upon a class of very young children the doctrine of transubstantiation. He illustrated it by the miracle of the water changed to wine at the marriage-feast in Cana, and said that He who could turn water into wine could turn his own blood into the same element, and also his body into bread to be eaten with it. Contrary, then, to the principles of our own law, sectarianism is taught in all Prussian schools ; but it is nevertheless true, as Professor Stowe says, that the Bible can be taught, and is taught, without it.

#### MUSIC.

All Prussian teachers are masters not only of vocal, but of instrumental music. One is as certain to see a violin as a blackboard in every schoolroom. Generally speaking, the teachers whom I saw, played upon the organ also, and some of them upon the piano and other instruments. Music was not only taught in school as an accomplishment, but used as a recreation. It is a moral means of great efficacy. Its practice promotes health ; it disarms anger, softens rough and turbulent natures, socializes, and brings the whole mind, as it were, into

a state of fusion, from which condition the teacher can mould it into what forms he will, as it cools and hardens.

Were it not that this Report is extending to so great a length, I should say much more on the advantages of teaching music in all our schools.

All the subjects I have enumerated were taught in all the schools I visited, whether in city or country, for the rich or for the poor. In the lowest school in the smallest and obscurest village, or for the poorest class in over-crowded cities; in the schools connected with pauper establishments, with houses of correction, or with prisons, — in all these, there was a teacher *of mature age*, of simple, unaffected, and decorous manners, benevolent in his expression, kind and genial in his intercourse with the young, and of such attainments and resources as qualified him not only to lay down the abstract principles of the above range of studies, but, by familiar illustration and apposite example, to commend them to the attention of the children.

I speak of the teachers whom I saw, and with whom I had more or less of personal intercourse; and, after some opportunity for the observation of public assemblies or bodies of men, I do not hesitate to say, that, if those teachers were brought together in one body, I believe they would form as dignified, intelligent, benevolent-looking a company of men as could be collected from the same amount of population in any country. They were alike free from arrogant pretension and from the affectation of humility. It has been often remarked, both in England and in this country, that the nature of a school-teacher's occupation exposes him, in some degree, to overbearing manners, and to dogmatism in the statement of his opinions. Accustomed to the exercise of supreme authority, moving among those who are so much his inferiors in point of attainment, perhaps it is proof of a very well-balanced mind if he keeps himself free from assumption in opinion, and haughtiness of demeanor. Especially are such faults or vices apt to spring

up in weak or ill-furnished minds. A teacher who cannot rule by love must do so by fear. A teacher who cannot supply material for the activity of his pupils' minds by his talent must put down that activity by force. A teacher who cannot answer all the questions, and solve all the doubts, of a scholar, as they arise, must assume an awful and mysterious air, and must expound in oracles which themselves need more explanation than the original difficulty. When a teacher knows much and is master of his whole subject, he can afford to be modest and unpretending. But when the head is the only text-book, and the teacher has not been previously prepared, he must, of course, have a small library. Among all the Prussian and Saxon teachers whom I saw, there were not half a dozen instances to remind one of those unpleasant characteristics — what Lord Bacon would call the "*idol of the tribe*," or profession — which sometimes degrade the name and disparage the sacred calling of a teacher. Generally speaking, there seemed to be a strong love for the employment, always a devotion to duty, and a profound conviction of the importance and sacredness of the office they filled. The only striking instance of disingenuousness or attempt at deception which I saw was that of a teacher who looked over the manuscript books of a large class of his scholars, selected the best, and, bringing it to me, said, "In seeing one, you see all."

Whence came this beneficent order of men, scattered over the whole country, moulding the character of its people, and carrying them forward in a career of civilization more rapidly than any other people in the world are now advancing? This is a question which can be answered only by giving an account of the

#### SEMINARIES FOR TEACHERS.

From the year 1820 to 1830 or 1835, it was customary, in all accounts of Prussian education, to mention the number of these

seminaries for teachers. This item of information has now become unimportant, as there are seminaries sufficient to supply the wants of the whole country. The stated term of residence at these seminaries is three years. Lately, and in a few places, a class of preliminary institutions has sprung up, — institutions where pupils are received in order to determine whether they are fit to become candidates to be candidates. As a pupil of the seminary is liable to be set aside for incompetency, even after a three-years' course of study ; so the pupils of these preliminary institutions, after having gone through with a shorter course, are liable to be set aside for incompetency to become competent.

Let us look for a moment at the guards and securities, which, in that country, environ this sacred calling. In the first place, the teacher's profession holds such a high rank in public estimation, that none who have failed in other employments or departments of business are encouraged to look upon school-keeping as an ultimate resource. Those, too, who, from any cause, despair of success in other departments of business or walks of life, have very slender prospects in looking forward to this. These considerations exclude at once all that inferior order of men, who, in some countries, constitute the main body of the teachers. Then come — though only in some parts of Prussia — these preliminary schools, where those who wish eventually to become teachers go, in order to have their natural qualities and adaptation for school-keeping tested ; for it must be borne in mind that a man may have the most unexceptionable character, may be capable of mastering all the branches of study, may even be able to make most brilliant recitations from day to day, and yet, from some coldness or repulsiveness of manner, from harshness of voice, from some natural defect in his person or in one of his senses, he may be adjudged an unsuitable model or archetype for children to be conformed to, or to grow by ; and hence he may be dismissed at the end of his probationary term of six months. At one of these preparatory schools which I visited, the list of sub-

jects at the examination — a part of which I saw — was divided into two classes, as follows: 1. Readiness in Thinking, German Language, including Orthography and Composition, History, Description of the Earth, Knowledge of Nature, Thorough Bass, Calligraphy, Drawing. 2. Religion, Knowledge of the Bible, Knowledge of Nature, Mental Arithmetic, Singing, Violin-playing, and Readiness or Facility in Speaking.\* The examination in all the branches of the first class was conducted in writing. To test a pupil's Readiness in Thinking, for instance, several topics for composition are given out, and, after the lapse of a certain number of minutes, whatever has been written must be handed in to the examiners. So questions in arithmetic are given; and the time occupied by the pupils in solving them is a test of their quickness of thought, or power of commanding their own resources. This facility, or faculty, is considered of great importance in a teacher.† In the second class of subjects, the pupils were examined *orally*. Two entire days were occupied in examining a class of thirty pupils, and only twenty-one were admitted to the seminary school; that is, only about two-thirds were considered to be eligible to become eligible as teachers, after three years' further study. Thus, in this first process, the chaff is winnowed out, and not a few of the lighter grains of the wheat.

It is to be understood that those who enter the seminary directly, and without this preliminary trial, have already studied, under able masters in the common schools, at least all the branches I have above described. The first two of the three years they expend mainly in reviewing and expanding their elementary knowledge. The German language is studied

\* It was a matter of great surprise to me, that, among the variety of branches taught in the People's Schools, I nowhere found *astronomy* in the number. I know not how to account for the omission of a subject at once so enlarging to the intellect, and so stimulating to devotional feelings.

† The above-described is a very common method of examining in the gymnasia and higher seminaries of Prussia. Certain sealed subjects for an exercise are given to the students: they are then locked up in a room, each by himself, and, at the expiration of a given time, they are called out, and it is seen what each one has been able to make out of his faculties.



in its relations to rhetoric and logic, and as æsthetic literature; arithmetic is carried out into algebra and mixed mathematics; geography, into commerce and manufactures, and into a knowledge of the various botanical and zoölogical productions of the different quarters of the globe; linear drawing, into perspective and machine drawing, and the drawing from models of all kinds, and from objects in Nature, &c. The theory and practice, not only of vocal but of instrumental music, occupy much time. Every pupil must play on the violin; most of them play on the organ, and some on other instruments. I recollect seeing a normal class engaged in learning the principles of harmony. The teacher first explained the principles on which they were to proceed. He then wrote a bar of music upon the blackboard, and called upon a pupil to write such notes for another part or accompaniment as would make *harmony* with the first. So he would write a bar with certain intervals, and then require a pupil to write another, with such intervals, as, according to the principles of musical science, would correspond with the first. A thorough course of reading on the subject of education is undertaken, as well as a more general course. Bible history is almost committed to memory. Connected with all the seminaries for teachers are large model or experimental schools. During the last part of the course, much of the students' time is spent in these schools. At first they go in and look on in silence while an accomplished teacher is instructing a class. Then they themselves commence teaching under the eye of such a teacher. At last they teach a class alone, being responsible for its proficiency, and for its condition as to order, &c., at the end of a week or other period. During the whole course, there are lectures, discussions, compositions, &c., on the theory and practice of teaching. The essential qualifications of a candidate for the office; his attainments, and the spirit of devotion and of religious fidelity in which he should enter upon his work; the modes of teaching the different branches; the motive-powers to be applied to the minds of children; dissertations upon the differ-

ent natural dispositions of children, and consequently the different ways of addressing them, of securing their confidence and affection, and of winning them to a love of learning and a sense of duty; and especially the sacredness of the teacher's profession; the idea that he stands, for the time being, in the place of a parent, and therefore that a parent's responsibilities rest upon him, that the most precious hopes of society are committed to his charge, and that on him depends, to a great extent, the temporal and perhaps the future well-being of hundreds of his fellow-creatures, — these are the conversations, the ideas, the feelings, amidst which the candidate for teaching spends his probationary years. This is the daily atmosphere he breathes. These are the sacred, elevating, invigorating influences constantly pouring in upon his soul. Hence, at the expiration of his course, he leaves the seminary to enter upon his profession, glowing with enthusiasm for the noble cause he has espoused, and strong in his resolves to perform its manifold and momentous duties.

Here, then, is the cause of the worth and standing of the teachers whom I had the pleasure and the honor to see. As a body of men, their character is more enviable than that of either of the three so-called "professions." They have more benevolence and self-sacrifice than the legal or medical, while they have less of sanctimoniousness and austerity, less of indisposition to enter into all the innocent amusements and joyous feelings of childhood, than the clerical. They are not unmindful of what belongs to men while they are serving God, nor of the duties they owe to this world while preparing for another.

On reviewing a period of six weeks, the greater part of which I spent in visiting schools in the north and middle of Prussia and in Saxony (excepting, of course, the time occupied in going from place to place), entering the schools to hear the first recitation in the morning, and remaining until the last was completed at night, I call to mind three things about which I

cannot be mistaken. In some of my opinions and inferences, I may have erred ; but, of the following facts, there can be no doubt : —

1. During all this time, I never saw a teacher hearing a lesson of any kind (excepting a reading or spelling lesson) *with a book in his hand.*

2. I never saw a teacher *sitting* while hearing a recitation.

3. Though I saw hundreds of schools, and thousands — I think I may say, within bounds, tens of thousands — of pupils, *I never saw one child undergoing punishment, or arraigned for misconduct. I never saw one child in tears from having been punished, or from fear of being punished.*

During the above period, I witnessed exercises in geography, ancient and modern ; in the German language, from the explanation of the simplest words up to belles-lettres disquisitions, with rules for speaking and writing ; in arithmetic, algebra, geometry, surveying, and trigonometry ; in book-keeping ; in civil history, ancient and modern ; in natural philosophy ; in botany and zoölogy ; in mineralogy, where there were hundreds of specimens ; in the endless variety of the exercises in thinking ; knowledge of Nature, of the world, and of society ; in Bible history and in Bible knowledge : and, as I before said, in no one of these cases did I see a teacher with a book in his hand. His book — his books — his library, was in his head. Promptly, without pause, without hesitation, from the rich resources of his own mind, he brought forth whatever the occasion demanded. I remember calling one morning at a country school in Saxony, where every thing about the premises, and the appearance both of teacher and children, indicated very narrow pecuniary circumstances. As I entered, the teacher was just ready to commence a lesson or lecture on French history. He gave not only the events of a particular period in the history of France, but mentioned, as he proceeded, all the contemporary sovereigns of neighboring nations. The ordinary time for a lesson, here as elsewhere, was an hour. This was somewhat longer ; for, towards the close, the teacher entered

upon a train of thought from which it was difficult to break off, and rose to a strain of eloquence which it was delightful to hear. The scholars were all absorbed in attention. They had paper, pen, and ink before them, and took brief notes of what was said. When the lesson touched upon contemporary events in other nations, — which, as I suppose, had been the subject of previous lessons, — the pupils were questioned concerning them. A small text-book of history was used by the pupils, which they studied at home.

I ought to say, further, that I generally visited schools without guide, or letter of introduction; presenting myself at the door, and asking the favor of admission. Though I had a general order from the minister of Public Instruction, commanding all schools, gymnasia, and universities in the kingdom to be opened for my inspection, yet I seldom exhibited it, or spoke of it, — at least not until I was about departing. I preferred to enter as a private individual and uncommended visitor.

I have said that I saw no teacher sitting in his school: aged or young, all stood. Nor did they stand apart and aloof in sullen dignity. They mingled with their pupils, passing rapidly from one side of the class to the other, animating, encouraging, sympathizing, breathing life into less active natures, assuring the timid, distributing encouragement and endearment to all. The looks of the Prussian teacher often have the expression and vivacity of an actor in a play. He gesticulates like an orator. His body assumes all the attitudes, and his face puts on all the variety of expression, which a public speaker would do if haranguing a large assembly on a topic vital to their interests.

It may seem singular, and perhaps to some almost ludicrous, that a teacher, in expounding the first rudiments of hand-writing, in teaching the difference between a hair-stroke and a ground-stroke, or how an *l* may be turned into a *b*, or a *u* into a *w*, should be able to work himself up into an oratorical fervor; should attitudinize, and gesticulate, and stride from one end of the class to the other, and appear in every way to be

as intensely engaged as an advocate when arguing an important cause to a jury. But, strange as it may seem, it is nevertheless true; and, before five minutes of such a lesson had elapsed, I have seen the children wrought up to an excitement proportionally intense, hanging upon the teacher's lips, catching every word he says, and evincing great elation or depression of spirits as they had or had not succeeded in following his instructions. So I have seen the same rhetorical vehemence on the part of the teacher, and the same interest and animation on the part of the pupils, during a lesson on the original sounds of the letters; that is, the difference between the long and the short sound of a vowel, or the different ways of opening the mouth in sounding the consonants *b* and *p*. This zeal of the teacher enkindles the scholars. He charges them with his own electricity to the point of explosion. Such a teacher has no idle, mischievous, whispering children around him, nor any occasion for the rod. He does not make desolation of all the active and playful impulses of childhood, and call it peace; nor, to secure stillness among his scholars, does he find it necessary to ride them with the nightmare of fear. I rarely saw a teacher put questions with his lips alone. He seems so much interested in his subject (though he might have been teaching the same lesson for the hundredth or five hundredth time), that his whole body is in motion, — eyes, arms, limbs, all contributing to the impression he desires to make; and, at the end of an hour, both he and his pupils come from the work all glowing with excitement.

Suppose a lawyer in one of our courts were to plead an important cause before a jury, but instead of standing and extemporizing, and showing by his gestures, and by the energy and ardor of his whole manner, that he felt an interest in his theme, instead of rising with his subject, and corruscating with flashes of genius and wit, he should plant himself lazily down in a chair, read from some old book which scarcely a member of the panel could fully understand, and, after drowsing away for an hour, should leave them, without having distinctly impressed

their minds with one fact, or led them to form one logical conclusion ; would it be any wonder if he left half of them joking with each other, or asleep? would it be any wonder — provided he were followed on the other side by an advocate of brilliant parts, of elegant diction, and attractive manner, by one who should pour sunshine into the darkest recesses of the case — if he lost not only his own reputation, but the cause of his client also?

These incitements and endearments of the teacher, this personal ubiquity, as it were, among all the pupils in the class, prevailed much more as the pupils were younger. Before the older classes, the teacher's manner became calm and didactic. The habit of attention being once formed, nothing was left for subsequent years or teachers but the easy task of maintaining it. Was there ever such a comment as this on the practice of hiring cheap teachers because the school is young, or incompetent ones because it is backward?

In Prussia and in Saxony, as well as in Scotland, the power of commanding and retaining the attention of a class is held to be a *sine quâ non* in a teacher's qualifications. If he has not talent, skill, vivacity, or resources of anecdote and wit, sufficient to arouse and retain the attention of his pupils during the accustomed period of recitation, he is deemed to have mistaken his calling, and receives a significant hint to change his vocation.

Take a group of little children to a toy-shop, and witness their outbursting eagerness and delight. They need no stimulus of badges or prizes to arrest or sustain their attention ; they need no quickening of their faculties by rod or ferule. To the exclusion of food and sleep, they will push their inquiries, until shape, color, quality, use, substance, both external and internal, of the objects, are exhausted ; and each child will want the show-man wholly to himself. But in all the boundless variety and beauty of Nature's work ; in that profusion and prodigality of charms with which the Creator has adorned and enriched every part of his creation ; in the delights of affection ;

in the ecstatic joys of benevolence; in the absorbing interest which an unsophisticated conscience instinctively takes in all questions of right and wrong, — in all these, is there not as much to challenge and command the attention of a little child as in the curiosities of a toy-shop? When as much of human art and ingenuity has been expended upon teaching as upon toys, there will be less difference between the cases.

The third circumstance I mentioned above was the beautiful relation of harmony and affection which subsisted between teacher and pupils. I cannot say that the extraordinary fact I have mentioned was not the result of chance or accident. Of the probability of that, others must judge. I can only say, that, during all the time mentioned, I never saw a blow struck, I never heard a sharp rebuke given, I never saw a child in tears, nor arraigned at the teacher's bar for any alleged misconduct. On the contrary, the relation seemed to be one of duty first, and then affection, on the part of the teacher; of affection first, and then duty, on the part of the scholar. The teacher's manner was better than parental; for it had a parent's tenderness and vigilance without the foolish dotings or indulgences to which parental affection is prone. I heard no child ridiculed, sneered at, or scolded, for making a mistake. On the contrary, whenever a mistake was made, or there was a want of promptness in giving a reply, the expression of the teacher was that of grief and disappointment, as though there had been a failure, not merely to answer the question of a master, but to comply with the expectations of a friend. No child was disconcerted, disabled, or bereft of his senses, through fear. Nay, generally, at the ends of the answers, the teacher's practice is to encourage him with the exclamation, "good," "right," "wholly right," &c., or to check him with his slowly and painfully articulated "no;" and this is done with a tone of voice that marks every degree of *plus* and *minus* in the scale of approbation or regret. When a difficult question has been put to a young child which tasks all his energies, the teacher approaches him with a mingled look of concern and encour-

agement; he stands before him, the light and shade of hope and fear alternately crossing his countenance; he lifts his arms and turns his body, as a bowler who has given a wrong direction to his bowl will writhe his person to bring the ball back upon its track; and finally, if the little wrestler with difficulty triumphs, the teacher felicitates him upon his success, perhaps seizes and shakes him by the hand in token of congratulation; and when the difficulty has been really formidable, and the effort triumphant, I have seen the teacher catch up the child in his arms and embrace him, as though he were not able to contain his joy. At another time, I have seen a teacher actually clap his hands with delight at a bright reply; and all this has been done so naturally and so unaffectedly as to excite no other feeling in the residue of the children than a desire, by the same means, to win the same caresses. What person worthy of being called by the name, or of sustaining the sacred relation of a parent, would not give any thing, bear any thing, sacrifice any thing, to have his children, during eight or ten years of the period of their childhood, surrounded by circumstances, and breathed upon by sweet and humanizing influences, like these?

I mean no disparagement of our own teachers by the remark I am about to make. As a general fact, these teachers are as good as public opinion has demanded; as good as the public sentiment has been disposed to appreciate; as good as public liberality has been ready to reward; as good as the preliminary measures taken to qualify them would authorize us to expect. But it was impossible to put down the questionings of my own mind,—whether a visitor could spend six weeks in our own schools without ever hearing an angry word spoken, or seeing a blow struck, or witnessing the flow of tears?

In the Prussian schools, I observed the fair operation and full result of two practices which I have dwelt upon with great repetition and urgency at home. One is, when hearing a class recite, always to ask the question before naming the scholar who is to give the answer. The question being first asked, all



the children are alert ; for each one knows that he is liable to be called upon for the reply. On the contrary, if the scholar who is expected to answer is first named, and especially if the scholars are taken in succession, according to local position, — that is, in the order of their seats or stations, — then the attention of all the rest has a reprieve until their turns shall come. In practice, this designation of the answerer before the question is propounded operates as a temporary leave of absence or furlough to all the other members of the class.

The other point referred to is that of adjusting the ease or difficulty of the questions to the capacity of the pupil. A child should never have any excuse or occasion for making a mistake ; nay, at first he should be most carefully guarded from the fact, and especially from the consciousness, of making a mistake. The questions should be ever so childishly simple, rather than that the answers should be erroneous. No expense of time can be too great, if it secures the habit and the desire of accuracy. Hence a false answer should be an event of the rarest occurrence, — one to be deprecated, to be looked upon with surprise and regret, and almost as an offence. Few things can have a worse effect upon a child's character than to set down a row of black marks against him at the end of every lesson.

The value of this practice of adjusting questions to the capacities and previous attainments of the pupils cannot be over-estimated. The opposite course *necessitates* mistakes, habituates and hardens the pupils to blundering and uncertainty, disparages the value of correctness in their eyes, and — what is a consequence as much to be lamented as any — gives plausibility to the argument in favor of emulation as a means of bringing children back to the habit of accuracy from which they have been driven. Would the trainer of horses deserve any compensation, or have any custom, if the first draughts which he should impose upon the young animals were beyond their ability to move?

The first of the above-named practices can be adopted by every teacher immediately, and whatever his degree of com-

petency in other respects may be. The last improvement can only be fully effected when the teacher can dispense with all text-books, and can teach and question from a full mind only. The case is hopeless where a conspiracy against the spread of knowledge has been entered into between an author who compiles, and a teacher who uses, a text-book in which the questions to be put are all prepared and printed.

In former reports, I have dwelt at length upon the expediency of employing female teachers to a greater extent in our schools. Some of the arguments in favor of this change have been, the greater intensity of the parental instinct in the female sex, their natural love of the society of children, and the superior gentleness and forbearance of their dispositions, — all of which lead them to mildness rather than severity, to the use of hope rather than of fear as a motive of action, and to the various arts of encouragement, rather than to annoyances and compulsion, in their management of the young. These views have been responded to and approved by almost all the school-committee men in the State; and, within the last few years, the practice of the different districts has been rapidly conforming to this theory. I must now say that those views are calculated only for particular meridians. In those parts of Germany which I have seen, they would not be understood. No necessity for them could be perceived. There, almost all teachers, for the youngest children as well as for the oldest, are men. Two or three times, I saw a female teacher in a private school; but none in a public, unless for teaching knitting, needle-work, &c. Yet, in these male teachers, there was a union of gentleness and firmness that left little to be desired.

Still, into almost every German school into which I entered, I inquired whether corporal punishment were allowed or used, and I was uniformly answered in the affirmative. But it was further said, that although all teachers had liberty to use it, yet cases of its occurrence were very rare, and these cases were confined almost wholly to young scholars. Until the teacher had time to establish the relation of affection between himself

and the new-comer into his school ; until he had time to create that attachment which children always feel towards any one who, day after day, supplies them with novel and pleasing ideas, — it was occasionally necessary to restrain and punish them. But, after a short time, a love of the teacher and a love of knowledge become a substitute — how admirable a one ! — for punishment. When I asked my common question of Dr. Vogel of Leipsic, he answered, that it was still used in the schools of which he had the superintendence. “But,” added he, “thank God, it is used less and less ; and, when we teachers become fully competent to our work, it will cease altogether.”

To the above I may add, that I found all the teachers, whom I visited, alive to the subject of improvement. They had libraries of the standard works on education, — works of which there are such great numbers in the German language. Every new book of any promise was eagerly sought after ; and I uniformly found the educational periodicals of the day upon the tables of the teachers. From the editor of one of these periodicals, I learned that more than thirty of this description are printed in Germany, and that the obscurest teacher in the obscurest village is usually a subscriber to one or more.

A feeling of deep humiliation overcame me as I contrasted this state of things with that in my own country, where, of all the numerous educational periodicals which have been undertaken within the last twenty years, only two, of any length of standing, still survive. All the others have failed through the indifference of teachers and the apathy of the public. One of the remaining two — that conducted by F. Dwight, Esq., of Albany, N.Y. — would probably have failed ere this, had not the legislature of the State generously come to its rescue, by subscribing for twelve thousand copies, — one to be sent to each district school in that great State. The other paper, as it is well known, has never re-imbursed to its editor his actual expenses in conducting it.

The extensive range and high grade of instruction which so many of the German youth are enjoying, and these noble

qualifications on the part of their instructors, are the natural and legitimate result of their seminaries for teachers. Without the latter, the former never could have been, any more than any effect without its cause. Although "the first regular seminary for teachers" (see Dr. Bache's report, page 222) "was established at Stettin in Pomerania in 1735," yet it was not until within the last quarter of a century, and especially since the general pacification of Europe, that the system has made such rapid advances towards perfection. And so powerfully has this system commended itself to all enlightened men, that not only have these seminaries for teachers been constantly increasing in Prussia, in Saxony, and in the States of the west and south-west of Germany, but most of the enlightened governments of Europe have followed the example. Out of Prussia, the plan was first adopted in Holland. The celebrated normal school of Mr. Prinsen was established at Haarlem, in 1816; and it is now acknowledged by all, that common-school education has been reformed and immeasurably advanced throughout the whole of that enlightened country by the influence of this school.

When that great governmental measure for the establishment of common schools throughout France was adopted in 1833, one of its main features was the creation of normal schools. At these institutions, young men are not only educated, but gratuitously maintained; they enjoy certain civil privileges, are exempted from military service, and, if they acquit themselves worthily, they are certain of an appointment as a school-teacher at the end of their course.

It is a fact most interesting in itself, and worthy to be cited as one of the proofs of the advancement (however slow) of the race, that the normal school now in successful operation at Versailles occupies the very site — some of its buildings are the very buildings, and its beautiful grounds the very grounds — which were the dog-kennels of Louis XIV. and his royal successors.\*

\* A fact kindred to the one mentioned in the text is, that, at Florence, an edifice once used by the Inquisition is now occupied by an infant school. How dif-

Scotland, so long and so justly celebrated among the countries of Europe for the superior education of its people, was not slow to discover the advantages of schools for the preparation of teachers. It has now one such school at Edinburgh, and one at Glasgow, besides the Madras College at St. Andrew's, which exercises the double function of giving a classical education, and of preparing teachers for schools.

Under the enlightened administration of the National Board of Education for Ireland, a normal school has been established at Dublin, and placed upon the most liberal basis.\* Excellent buildings with large and beautiful yards and play-grounds are provided for it in the very heart of the city. Here hundreds of the poor children are in constant attendance, to whom instruction is given, in part by professional teachers, and in part by the pupils of the normal school. The normal pupils reside at a place called Glasnevin, a little way out of the city. Here they have a farm, which is conducted by a scientific agriculturist. When not engaged at the school in the city, the pupils are occupied on the farm. At this normal school, none but actual teachers are received. They leave their own schools, and come from all parts of Ireland to receive instruction here. Their whole maintenance — tuition, board, lodging — is gratuitous; and a certain sum is secured to them annually on their return to their schools. More than a thousand teachers have already availed themselves of the benefits of this noble charity.

Though the government of England has declined to follow the example of all the enlightened nations of Europe, yet private individuals and societies are striving to remedy, to some extent, the consequences of this neglect. A normal school established under the auspices of that enlightened educationist, Mr. Kay Shuttleworth, is now in successful operation at Battersea; and the Church party have recently purchased and fitted up, at an expense of a hundred thousand dollars, a normal school at Chelsea, near London.

ferent these uses! A dog-kennel and a normal school! — a pandemonium and an infant school!

\* Lord Morpeth gave £1,000 towards establishing this school.

After the revolution of 1830 which separated Belgium from Holland, the former country neglected its schools; and, since that period, it seems to be acknowledged on all hands that the education of the Belgian people has been rapidly retrograding. But, by virtue of a recent law (Sept. 23, 1842), an entire school system is now organizing for that country. Under the new order of things, there are to be two normal schools, — one at Lierre in the Province of Antwerp, the other at Nivelles in the Province of Brabant.

Even at St. Petersburg, in Russia, says Professor Stowe, “a model school for the education of teachers of every grade, and for all parts of the empire,” has been established. Thus it appears that almost every member of the great European family of nations, which possesses any claims to be called enlightened or civilized, has looked with favor upon what may be considered one of the greatest of all modern instrumentalities for the improvement of the race; and has either founded this class of institutions by the direct authority and endowment of the government itself, or has allowed and encouraged the same thing to be done by the liberal and philanthropic portion of its people. One empire alone has signalized its name by an opposite course. That empire is Austria. Although the Austrian government maintains what it calls a system of schools, yet they are schools which set metes and bounds, on all sides, to the development of the human faculties; although it prepares a few teachers, yet it is the office of these teachers to lop and prune the common mind, and not to develop it; and when, during the very year previous to my visit, in a part of that empire bordering upon the kingdom of Saxony, — across whose frontier a little of the light and genial warmth of education had been reflected, — a few of the more enlightened subjects of that arbitrary power applied to it for liberty to establish a normal school within their own province, and offered to supply, gratuitously, the money requisite for the purpose, both the application and the offer were rejected with indignity. Austria, impenetrable Austria, over which the black horizon of despotism

exemption from attendance are sickness and death. The German language has a word for which we have no equivalent either in language or in idea. The word is used in reference to children, and signifies *due to the school*; that is, when the legal age for going to school arrives, the right of the school to the child's attendance attaches, just as, with us, the right of a creditor to the payment of a note or bond attaches on the day of its maturity. If a child, after having been once enrolled as a member of the school, absents himself from it, or if, after arriving at the legal age, he is not sent there by his parents, a notice in due form is sent to apprise them of the delinquency. If the child is not then forthcoming, a summons follows. The parent is cited before the court; and if he has no excuse, and refuses compliance, the child is taken from him, and sent to school, the father to prison.

From a pamphlet published by a director of the schools in Halle, I translate the following forms of notices and summonses, in order to give a more vivid idea of the manner in which this business is conducted:—

*(Notice from the Teacher to the Parent.)*

We miss — from the class since —, without having received any intimation of the reasons of absence. We request you, therefore, to indorse the cause of absence on the back of this ticket, and to send your child (or ward) to school again.

HALLE,

If the offence of absence without excuse is continued or is repeated, the register of the school is exhibited to the school-director, who sends the following summons to the parent:—

To —,

We now present to you the list of school-absences through the police. Your — is found upon it. If you do not wish to be informed against, present yourself, at the latest, between the hours of        and        to the undersigned, with your excuses.

HALLE,

If a valid excuse is not now forthcoming, the school-director gives information of the case to the school-inspector, who cites

the delinquent parent before a magistrate by the following warrant, which is put into the hands of a police-officer to be served : —

— are hereby called upon to appear on                      at                      to be tried for the neglected school-attendance of your child.

HALLE,

(Signed) —, *School-Inspector.*

I had frequent conversations with school-teachers and school-officers respecting this compulsory attendance of the children. From these sources, I gathered the information, that, with one exception, there was very little complaint about it, or opposition to it. Were it not that some of the children are compelled to receive instruction in a religious creed from which their parents dissent, there would rarely be a murmur of complaint in the community. The children are so fond of the school, the benefits of public instruction are now so universally acknowledged, and the whole public sentiment has become so conformed to the practice, that I believe there is quite as little complaint (excepting on account of the invasion of religious freedom before referred to) under the rigorous system of Prussia as under our lax one. One school-officer, of whom I inquired whether this enforced school-attendance were acceptable and popular, replied, that the people did not know any other way, and that all the children were born with an innate idea of going to school.

It should be added, however, that parents are not obliged to send their children to a *public* school; if they prefer it, the children may be sent to a *private* school: but they *must* be sent to some one. All teachers, however, of private as well as of public schools, must submit to an examination, and have a certificate of qualification from the government officer.

A very erroneous idea prevails with us, that this enforcement of school-attendance is the prerogative of despotism alone. I believe it is generally supposed here that such compulsion is not merely incompatible with, but impossible in, a free or elective government. This is a great error. With the exception



of Austria (including Bohemia) and Prussia, almost all the other States of Germany have now constitutional governments. Many of them have an upper and lower house of assembly, like our Senate and House of Representatives. Whoever will attend the Parliament of Saxony, for instance, will witness as great freedom of debate as in any country in the world; and no law can be passed but by a majority of the representatives, chosen by the people themselves. In the first school I visited, in Saxony, I heard a lesson "On Government," in which all the great privileges secured to the Saxon people by their constitution were enumerated; and both teacher and pupils contrasted their present free condition with that of some other countries, as well as with that of their own ancestors, in a spirit of congratulation and triumph. The elective franchise in this and in several of the other States of Germany is more generally enjoyed, that is, the restrictions upon it are less, than in some of the States of our own Union. And yet in Saxony, years after the existence of this constitution, and when no law could be passed without the assent of the people's representatives in Parliament assembled, a general code of school laws was enacted, from the 143d section of which I translate the following. The title is, —

UPON NEGLECT OF SCHOOL-ATTENDANCE. — "1st. In every parish where there is a school-union, there shall be a school-messenger. In large parishes which are divided into many school-districts, every school shall have a particular messenger, besides one for every school-district.

"2d. Excepting on the common vacations, and on those weeks and days when there is no school, the school-messenger must ask the teacher, on every school-day, after the school-hours, what children have been absent without an adequate excuse.

"3d. In places where there is but one school, the school-messenger must ask this question at least twice a week, on Wednesdays and Saturdays, and require an account of the last three days.

"4th. The next morning, not later than an hour before the beginning of the morning school, the school-messenger of every place must go to the parents of the absent and unexcused child, and demand him for the school, or else the reason for his absence. For every such visit, the parent must give the messenger six pfennings.

"5th. If a child does not come after this demand, but remains away unexcused for two days, the school-messenger must take him on the third day, and conduct him to the school. The fee from the parents shall be one groschen.

"6th. A child of a place where there is but one school, who does not come on the Monday or Thursday after the visit of the school-messenger, and remains unexcused, also if he stays away six days without adequate excuse, must be taken by the messenger and carried to the school; and the fee from the parents shall be two groschen.

"7th. If the child stays from the school, with the knowledge of its parents, after being thus carried to it by the messenger, measures for punishment must be taken.

"8th. If the messenger cannot collect his fees, he must apply to the magistrates, whose duty it is to coerce the payment.

"9th. If the parents are actually too poor to pay the same, the magistrates must demand payment quarterly from the school-chest.

"10th. The magistracy must lend their assistance to the messenger, if, without good reason, he is prevented from taking the child to school, or if he is improperly treated while executing the duties of his office."

In many of the German States, the anniversaries of the date of their constitution are celebrated by *fêtes* and shows, by dinners and speeches, as we celebrate our great national festival, the Fourth of July; and yet, in these States, by virtue of laws which the free representatives of a free people have enacted, every child is compelled to attend school!

#### HIGHER SCHOOLS.

This account of the people's schools would be very imperfect did I omit to mention one or two other classes among them, corresponding in grade with our town-schools, or public high-schools. These are the real and burgher schools, which hold the same relation to the elementary schools that our town-schools hold to those of the districts.

The Royal Real School of Berlin — the first in point of date — was formed as early as 1747 by Counsellor Hecker. The epithet "real" is used in contradistinction from "learned." At the time when this school was established, Latin and Greek were the exclusive objects of study in the learned schools; and

the avowed purpose in founding this was, that "not mere words should be taught to the pupils, but realities, — explanations being made to them from models and plans, and of subjects calculated to be useful in after-life." The establishment of this class of schools was the commencement of a great educational reform. Even now, the Germans could afford to barter any quantity of classical annotations, or of home-made Latin and Greek prose or verse, for enough of mechanical skill to make a good household utensil, a good farming-tool, or a good machine. Doubtless, too, their best students would excogitate more philosophically by day if they knew enough to sleep more physiologically at night; but this knowledge Latin and Greek do not give.

The special design of the Burgher school is to prepare young men to become citizens, — that is, to qualify them for the transaction of such municipal or other public affairs as they may be called upon to perform. The man whose duty it may be to build bridges, to construct drains, to lay out streets or roads, to erect public buildings, to pass ordinances for the establishment or regulation of the police, and for the general administration of city or county affairs, should have some special preparation for duties so various and responsible; and the city which fails to educate those young men who are afterwards to perform such duties in her behalf will find, in the end, that their mistakes, mismanagement, and want of economy, will cost a hundred times more than the original outlay which would have qualified them for such offices. In a country like ours, where all the citizens not only elect to office, but are themselves eligible, if education does not fit the great body of the people for the performance of these duties, it is clear that we must be constantly putting valuable trusts into the hands of incompetent trustees.

The above classes of schools are also schools for the useful arts, manufactures, and commerce. In some of them, architecture, engineering, mining, &c., are taught; and the course of studies is susceptible of being enlarged to any extent, until they become complete polytechnic institutions.

I was so fortunate as to arrive at Cologne pending an examination of its Burgher school. One day had already been spent ; but I was present on the morning of the second, before the exercises commenced. A programme of the order of performances, accompanied by remarks and explanations on the course of studies and the methods of instruction, had been prepared for the use of examiners and visitors. It consisted of twenty-four printed folio pages, a fact which shows the degree of attention devoted to the subject. The number and apparent standing and character of the visitors ratified the inference which one would naturally draw from such a fact. From this programme, it appeared that the subjects of examination were religion ; the German (their native) language ; the French, Latin, English, and Italian languages ; history, geography, knowledge of Nature, arithmetic, and geometry ; drawing, calligraphy, and singing, — in all, thirteen branches.

I shall speak only of that part of the examination which I heard.

In arithmetic, after a little time had been spent in expounding the mere relations of numbers, the pupils gave an account of the different weights and measures of the neighboring States ; of the standard value of gold and silver as determined by the laws of different nations ; of the current coins of all the nations of Europe and of the United States of North America. They were then required to change coins of one denomination and country into those of another. After this they were examined in electro-magnetism, having apparatus on which to try experiments. A class of boys from thirteen to seventeen years of age was then examined in the French and English languages. During the exercise in French, *both teacher and pupils spoke in French ; and, during the exercise in English, both teacher and pupils spoke in English.* These exercises consisted in translation, parsing, and general remarks. The teacher's remarks on the construction and genius of the English language would have done credit to a professor in one of our colleges. A want of time excluded examinations in Latin and Italian ; but all that

I saw and heard was performed so well as to create an assurance of ability to sustain an examination in any other branch set down in the programme. After this came declamation in three languages. In this exercise, I observed there was not a single gesticulation, nor any symptom of an internal impulse towards one. The lads took their station behind a table, which they seized with both hands, and held steadfastly until the close.

After the examination was completed, the head teacher occupied half an hour in delivering an address, a part of which was directed to the young men who were about to leave the school, and a part to parents and visitors on their duties to it.\*

In many parts of the Continent, evening schools are kept, which are attended by apprentices and others. In these schools, all branches of useful knowledge are taught. In Paris, I have seen men forty or fifty years of age in attendance, and diligently studying the branches appropriate to their respective occupations. Such schools occupy the place, to some extent, of our debating-clubs and lyceums. The school communicates knowledge; the debating-club and the lyceum suppose the actual possession of knowledge. Where this knowledge does not actually exist, is not the school preferable?

In some of the German States, the law requires apprentices to attend school a certain number of evenings in every week. In one of these States, I was informed that complaint had been made by the apprentices because they were deprived of the disposal of their own time, and were obliged to defray the expense of tuition at school out of their pocket-money. To obviate this complaint, the law was changed. All apprentices were still

\* In a private school in Utrecht, composed of both masters and misses, I heard a lesson in English history, conducted principally in the French language. During the lesson, a boy was called to the blackboard, who traced down in a diagram form, in a manner similar to the great historical charts to be found in Lavoisne's Atlas, a regular succession of the English sovereigns from the time of Edward III. to the present Queen. How valuable and permanent must history be when learned in this way!

In this school, four languages, the German, Dutch, French, and English, were spoken promiscuously by both teachers and pupils; and each one of these languages seemed to be struggling to obtain its share of attention.

obliged to pay a tuition-fee ; but the government remitted the payment in favor of those who attended, exacting it only of the absentees.

In most, if not in all, the German cities which I visited, I found Sunday schools in active operation. These are established, not, as with us, for the purpose of giving moral or religious, but secular instruction. Their exercises consist mainly in reading, writing, composition, arithmetic, geography, drawing, and so forth. They are attended principally by apprentices, laborers, and others, whose age for attending the elementary schools has passed, and who are engaged, during the week-days, in their respective industrial employments.

From what has been said, it will be observed that there is a remarkable difference between the lads, or youth, of Prussia and our own, in regard to the nature and character of the literary exercises to which they betake themselves after leaving the elementary schools. With us they attend the lyceum, the debating-society, the political reading-room or news-room. There, notwithstanding the excellent instruction they have already received in the school, they seek to enlarge and carry forward their elementary knowledge by attending the evening school and the Sunday school. Their course springs from the idea, that further preliminary knowledge is to be acquired ; ours from the idea, that sufficient preliminary knowledge has already been obtained, — sufficient to qualify them to enter upon the business of life, sufficient for the decision of all social and political questions. Before we give a decided preference to our own course, would it not be well to inquire whether the supposition on which it proceeds is true ?

In Prussia, Saxony, and some other of the German States, schools for further cultivation, as they are called (*Fortbildung-Schulen*), are rapidly increasing.

Having brought to a close what I propose to say respecting the spirit and the methods of instruction prevalent in the German schools, perhaps it may not be wholly useless to others, who may make a similar tour of exploration, if I add, that, after

shuts down like a cover, excluding, as far as possible, all light, intelligence, and knowledge, — Austria, true to the base and cowardly instincts of ignorance and bigotry, disallows the establishment of a free normal school for the improvement of its people, and spurns the proffered munificence of the noble benefactors who would endow it!

#### SCHOOL-INSPECTORS.

The extraordinary system of measures by which the Prussian schools have been elevated, and are now sustained, would not be understood without taking into view the office and character of the school-inspectors. The kingdom is divided into circles, or districts; and, for each one of these, there is one or more school commissioners or inspectors. These officers have some duties like those of our town school-committees; but their functions more nearly resemble those of the deputy superintendents appointed for each county in the State of New York, the latter being required by law to visit and examine all the schools in their respective counties, summer and winter, and make report of their condition to the State superintendent.

By visiting schools, attending examinations, and by personal introduction, I saw many of this class of magistrates. They had evidently been selected from among the most talented and educated men in the community. They were such men as would here be appointed as presidents or professors of colleges, judges of the higher courts, or called to other civil stations for which talent, attainment, and character are deemed essential prerequisites. The office is one both of honor and emolument.

It is easy to see how efficient such a class of officers must have been in bringing up teachers to a high standard of qualifications at the beginning; and in creating, at last, a self-inspired, self-improving spirit, among them. If examiners, inspectors, school-committees, — or by whatever other name they may be called, — know little of geography, grammar,

arithmetic, or the art of reading, the candidate who presents himself before them for examination will feel no need of knowing more than they do; and a succession of ignorant and incompetent candidates will be sure to apply for schools in towns which have ignorant examiners. The whole Prussian system impressed me with a deep sense of the vast difference in the amount of general attainment and talent devoted to the cause of popular education in that country as compared with any other country or state I had ever seen. I must refer to other sources of information in regard to the municipal or parochial supervision of the schools; and can only observe, that over all these intermediate functionaries is the Minister of Public Instruction. This officer is a member of the king's council. He takes rank with the highest officers in the government, sits at the council-board of the nation with the minister of state, of war, of finance, &c.; and his honors and emoluments are equal to theirs. He has no merely clerical duties to perform; and, being relieved from all official drudgery, he can devote his time and his talents to the higher duties of his department. Such also has been the case in France since the late organization of their system of public instruction.

In justice to Prussia also, and as one of the explanations of the remarkable phenomena presented by her schools, the fact should not be omitted, that, before establishing her own school-system, she commissioned agents to visit other countries to examine into theirs, in order that her own path might be illuminated by all the light that could be reflected upon it from other parts of the world.

#### SCHOOL-ATTENDANCE.

One of the most signal features of the school-system of Prussia and of many of the neighboring States is the universality of the children's attendance. After a child has arrived at the legal age for attending school, — whether he be the child of noble or of peasant, — the only two *absolute* grounds of



exemption from attendance are sickness and death. The German language has a word for which we have no equivalent either in language or in idea. The word is used in reference to children, and signifies *due to the school*; that is, when the legal age for going to school arrives, the right of the school to the child's attendance attaches, just as, with us, the right of a creditor to the payment of a note or bond attaches on the day of its maturity. If a child, after having been once enrolled as a member of the school, absents himself from it, or if, after arriving at the legal age, he is not sent there by his parents, a notice in due form is sent to apprise them of the delinquency. If the child is not then forthcoming, a summons follows. The parent is cited before the court; and if he has no excuse, and refuses compliance, the child is taken from him, and sent to school, the father to prison.

From a pamphlet published by a director of the schools in Halle, I translate the following forms of notices and summonses, in order to give a more vivid idea of the manner in which this business is conducted:—

*(Notice from the Teacher to the Parent.)*

We miss — from the class since —, without having received any intimation of the reasons of absence. We request you, therefore, to indorse the cause of absence on the back of this ticket, and to send your child (or ward) to school again.

HALLE,

If the offence of absence without excuse is continued or is repeated, the register of the school is exhibited to the school-director, who sends the following summons to the parent:—

To —,

We now present to you the list of school-absences through the police. Your — is found upon it. If you do not wish to be informed against, present yourself, at the latest, between the hours of        and        to the undersigned, with your excuses.

HALLE,

If a valid excuse is not now forthcoming, the school-director gives information of the case to the school-inspector, who cites

the delinquent parent before a magistrate by the following warrant, which is put into the hands of a police-officer to be served : —

— are hereby called upon to appear on        at        to be tried for the neglected school-attendance of your child.

HALLÉ,

(Signed) —, *School-Inspector.*

I had frequent conversations with school-teachers and school-officers respecting this compulsory attendance of the children. From these sources, I gathered the information, that, with one exception, there was very little complaint about it, or opposition to it. Were it not that some of the children are compelled to receive instruction in a religious creed from which their parents dissent, there would rarely be a murmur of complaint in the community. The children are so fond of the school, the benefits of public instruction are now so universally acknowledged, and the whole public sentiment has become so conformed to the practice, that I believe there is quite as little complaint (excepting on account of the invasion of religious freedom before referred to) under the rigorous system of Prussia as under our lax one. One school-officer, of whom I inquired whether this enforced school-attendance were acceptable and popular, replied, that the people did not know any other way, and that all the children were born with an innate idea of going to school.

It should be added, however, that parents are not obliged to send their children to a *public* school; if they prefer it, the children may be sent to a *private* school: but they *must* be sent to some one. All teachers, however, of private as well as of public schools, must submit to an examination, and have a certificate of qualification from the government officer.

A very erroneous idea prevails with us, that this enforcement of school-attendance is the prerogative of despotism alone. I believe it is generally supposed here that such compulsion is not merely incompatible with, but impossible in, a free or elective government. This is a great error. With the exception

the children are alert ; for each one knows that he is liable to be called upon for the reply. On the contrary, if the scholar who is expected to answer is first named, and especially if the scholars are taken in succession, according to local position, — that is, in the order of their seats or stations, — then the attention of all the rest has a reprieve until their turns shall come. In practice, this designation of the answerer before the question is propounded operates as a temporary leave of absence or furlough to all the other members of the class.

The other point referred to is that of adjusting the ease or difficulty of the questions to the capacity of the pupil. A child should never have any excuse or occasion for making a mistake ; nay, at first he should be most carefully guarded from the fact, and especially from the consciousness, of making a mistake. The questions should be ever so childishly simple, rather than that the answers should be erroneous. No expense of time can be too great, if it secures the habit and the desire of accuracy. Hence a false answer should be an event of the rarest occurrence, — one to be deprecated, to be looked upon with surprise and regret, and almost as an offence. Few things can have a worse effect upon a child's character than to set down a row of black marks against him at the end of every lesson.

The value of this practice of adjusting questions to the capacities and previous attainments of the pupils cannot be over-estimated. The opposite course *necessitates* mistakes, habituates and hardens the pupils to blundering and uncertainty, disparages the value of correctness in their eyes, and — what is a consequence as much to be lamented as any — gives plausibility to the argument in favor of emulation as a means of bringing children back to the habit of accuracy from which they have been driven. Would the trainer of horses deserve any compensation, or have any custom, if the first draughts which he should impose upon the young animals were beyond their ability to move?

The first of the above-named practices can be adopted by every teacher immediately, and whatever his degree of com-

petency in other respects may be. The last improvement can only be fully effected when the teacher can dispense with all text-books, and can teach and question from a full mind only. The case is hopeless where a conspiracy against the spread of knowledge has been entered into between an author who compiles, and a teacher who uses, a text-book in which the questions to be put are all prepared and printed.

In former reports, I have dwelt at length upon the expediency of employing female teachers to a greater extent in our schools. Some of the arguments in favor of this change have been, the greater intensity of the parental instinct in the female sex, their natural love of the society of children, and the superior gentleness and forbearance of their dispositions, — all of which lead them to mildness rather than severity, to the use of hope rather than of fear as a motive of action, and to the various arts of encouragement, rather than to annoyances and compulsion, in their management of the young. These views have been responded to and approved by almost all the school-committee men in the State; and, within the last few years, the practice of the different districts has been rapidly conforming to this theory. I must now say that those views are calculated only for particular meridians. In those parts of Germany which I have seen, they would not be understood. No necessity for them could be perceived. There, almost all teachers, for the youngest children as well as for the oldest, are men. Two or three times, I saw a female teacher in a private school; but none in a public, unless for teaching knitting, needle-work, &c. Yet, in these male teachers, there was a union of gentleness and firmness that left little to be desired.

Still, into almost every German school into which I entered, I inquired whether corporal punishment were allowed or used, and I was uniformly answered in the affirmative. But it was further said, that although all teachers had liberty to use it, yet cases of its occurrence were very rare, and these cases were confined almost wholly to young scholars. Until the teacher had time to establish the relation of affection between himself

and the new-comer into his school ; until he had time to create that attachment which children always feel towards any one who, day after day, supplies them with novel and pleasing ideas, — it was occasionally necessary to restrain and punish them. But, after a short time, a love of the teacher and a love of knowledge become a substitute — how admirable a one ! — for punishment. When I asked my common question of Dr. Vogel of Leipsic, he answered, that it was still used in the schools of which he had the superintendence. “But,” added he, “thank God, it is used less and less ; and, when we teachers become fully competent to our work, it will cease altogether.”

To the above I may add, that I found all the teachers, whom I visited, alive to the subject of improvement. They had libraries of the standard works on education, — works of which there are such great numbers in the German language. Every new book of any promise was eagerly sought after ; and I uniformly found the educational periodicals of the day upon the tables of the teachers. From the editor of one of these periodicals, I learned that more than thirty of this description are printed in Germany, and that the obscurest teacher in the obscurest village is usually a subscriber to one or more.

A feeling of deep humiliation overcame me as I contrasted this state of things with that in my own country, where, of all the numerous educational periodicals which have been undertaken within the last twenty years, only two, of any length of standing, still survive. All the others have failed through the indifference of teachers and the apathy of the public. One of the remaining two — that conducted by F. Dwight, Esq., of Albany, N.Y. — would probably have failed ere this, had not the legislature of the State generously come to its rescue, by subscribing for twelve thousand copies, — one to be sent to each district school in that great State. The other paper, as it is well known, has never re-imbursed to its editor his actual expenses in conducting it.

The extensive range and high grade of instruction which so many of the German youth are enjoying, and these noble

qualifications on the part of their instructors, are the natural and legitimate result of their seminaries for teachers. Without the latter, the former never could have been, any more than any effect without its cause. Although "the first regular seminary for teachers" (see Dr. Bache's report, page 222) "was established at Stettin in Pomerania in 1735," yet it was not until within the last quarter of a century, and especially since the general pacification of Europe, that the system has made such rapid advances towards perfection. And so powerfully has this system commended itself to all enlightened men, that not only have these seminaries for teachers been constantly increasing in Prussia, in Saxony, and in the States of the west and south-west of Germany, but most of the enlightened governments of Europe have followed the example. Out of Prussia, the plan was first adopted in Holland. The celebrated normal school of Mr. Prinsen was established at Haarlem, in 1816; and it is now acknowledged by all, that common-school education has been reformed and immeasurably advanced throughout the whole of that enlightened country by the influence of this school.

When that great governmental measure for the establishment of common schools throughout France was adopted in 1833, one of its main features was the creation of normal schools. At these institutions, young men are not only educated, but gratuitously maintained; they enjoy certain civil privileges, are exempted from military service, and, if they acquit themselves worthily, they are certain of an appointment as a school-teacher at the end of their course.

It is a fact most interesting in itself, and worthy to be cited as one of the proofs of the advancement (however slow) of the race, that the normal school now in successful operation at Versailles occupies the very site—some of its buildings are the very buildings, and its beautiful grounds the very grounds—which were the dog-kennels of Louis XIV. and his royal successors.\*

\* A fact kindred to the one mentioned in the text is, that, at Florence, an edifice once used by the Inquisition is now occupied by an infant school. How dif-

Scotland, so long and so justly celebrated among the countries of Europe for the superior education of its people, was not slow to discover the advantages of schools for the preparation of teachers. It has now one such school at Edinburgh, and one at Glasgow, besides the Madras College at St. Andrew's, which exercises the double function of giving a classical education, and of preparing teachers for schools.

Under the enlightened administration of the National Board of Education for Ireland, a normal school has been established at Dublin, and placed upon the most liberal basis.\* Excellent buildings with large and beautiful yards and play-grounds are provided for it in the very heart of the city. Here hundreds of the poor children are in constant attendance, to whom instruction is given, in part by professional teachers, and in part by the pupils of the normal school. The normal pupils reside at a place called Glasnevin, a little way out of the city. Here they have a farm, which is conducted by a scientific agriculturist. When not engaged at the school in the city, the pupils are occupied on the farm. At this normal school, none but actual teachers are received. They leave their own schools, and come from all parts of Ireland to receive instruction here. Their whole maintenance — tuition, board, lodging — is gratuitous; and a certain sum is secured to them annually on their return to their schools. More than a thousand teachers have already availed themselves of the benefits of this noble charity.

Though the government of England has declined to follow the example of all the enlightened nations of Europe, yet private individuals and societies are striving to remedy, to some extent, the consequences of this neglect. A normal school established under the auspices of that enlightened educationist, Mr. Kay Shuttleworth, is now in successful operation at Battersea; and the Church party have recently purchased and fitted up, at an expense of a hundred thousand dollars, a normal school at Chelsea, near London.

ferent these uses! A dog-kennel and a normal school! — a pandemonium and an infant school!

\* Lord Morpeth gave £1,000 towards establishing this school.

After the revolution of 1830 which separated Belgium from Holland, the former country neglected its schools; and, since that period, it seems to be acknowledged on all hands that the education of the Belgian people has been rapidly retrograding. But, by virtue of a recent law (Sept. 23, 1842), an entire school system is now organizing for that country. Under the new order of things, there are to be two normal schools, — one at Lierre in the Province of Antwerp, the other at Nivelles in the Province of Brabant.

Even at St. Petersburg, in Russia, says Professor Stowe, “a model school for the education of teachers of every grade, and for all parts of the empire,” has been established. Thus it appears that almost every member of the great European family of nations, which possesses any claims to be called enlightened or civilized, has looked with favor upon what may be considered one of the greatest of all modern instrumentalities for the improvement of the race; and has either founded this class of institutions by the direct authority and endowment of the government itself, or has allowed and encouraged the same thing to be done by the liberal and philanthropic portion of its people. One empire alone has signalized its name by an opposite course. That empire is Austria. Although the Austrian government maintains what it calls a system of schools, yet they are schools which set metes and bounds, on all sides, to the development of the human faculties; although it prepares a few teachers, yet it is the office of these teachers to lop and prune the common mind, and not to develop it; and when, during the very year previous to my visit, in a part of that empire bordering upon the kingdom of Saxony, — across whose frontier a little of the light and genial warmth of education had been reflected, — a few of the more enlightened subjects of that arbitrary power applied to it for liberty to establish a normal school within their own province, and offered to supply, gratuitously, the money requisite for the purpose, both the application and the offer were rejected with indignity. Austria, impenetrable Austria, over which the black horizon of despotism



shuts down like a cover, excluding, as far as possible, all light, intelligence, and knowledge, — Austria, true to the base and cowardly instincts of ignorance and bigotry, disallows the establishment of a free normal school for the improvement of its people, and spurns the proffered munificence of the noble benefactors who would endow it !

#### SCHOOL-INSPECTORS.

The extraordinary system of measures by which the Prussian schools have been elevated, and are now sustained, would not be understood without taking into view the office and character of the school-inspectors. The kingdom is divided into circles, or districts ; and, for each one of these, there is one or more school commissioners or inspectors. These officers have some duties like those of our town school-committees ; but their functions more nearly resemble those of the deputy superintendents appointed for each county in the State of New York, the latter being required by law to visit and examine all the schools in their respective counties, summer and winter, and make report of their condition to the State superintendent.

By visiting schools, attending examinations, and by personal introduction, I saw many of this class of magistrates. They had evidently been selected from among the most talented and educated men in the community. They were such men as would here be appointed as presidents or professors of colleges, judges of the higher courts, or called to other civil stations for which talent, attainment, and character are deemed essential prerequisites. The office is one both of honor and emolument.

It is easy to see how efficient such a class of officers must have been in bringing up teachers to a high standard of qualifications at the beginning ; and in creating, at last, a self-inspired, self-improving spirit, among them. If examiners, inspectors, school-committees, — or by whatever other name they may be called, — know little of geography, grammar,

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exemption from attendance are sickness and death. The German language has a word for which we have no equivalent either in language or in idea. The word is used in reference to children, and signifies *due to the school*; that is, when the legal age for going to school arrives, the right of the school to the child's attendance attaches, just as, with us, the right of a creditor to the payment of a note or bond attaches on the day of its maturity. If a child, after having been once enrolled as a member of the school, absents himself from it, or if, after arriving at the legal age, he is not sent there by his parents, a notice in due form is sent to apprise them of the delinquency. If the child is not then forthcoming, a summons follows. The parent is cited before the court; and if he has no excuse, and refuses compliance, the child is taken from him, and sent to school, the father to prison.

From a pamphlet published by a director of the schools in Halle, I translate the following forms of notices and summonses, in order to give a more vivid idea of the manner in which this business is conducted:—

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If the offence of absence without excuse is continued or is repeated, the register of the school is exhibited to the school-director, who sends the following summons to the parent:—

To —,

We now present to you the list of school-absences through the police. Your — is found upon it. If you do not wish to be informed against, present yourself, at the latest, between the hours of — and — to the undersigned, with your excuses.

HALLE,

If a valid excuse is not now forthcoming, the school-director gives information of the case to the school-inspector, who cites

the delinquent parent before a magistrate by the following warrant, which is put into the hands of a police-officer to be served : —

— are hereby called upon to appear on        at        to be tried for the neglected school-attendance of your child.

HALLE,

(Signed) —, *School-Inspector.*

I had frequent conversations with school-teachers and school-officers respecting this compulsory attendance of the children. From these sources, I gathered the information, that, with one exception, there was very little complaint about it, or opposition to it. Were it not that some of the children are compelled to receive instruction in a religious creed from which their parents dissent, there would rarely be a murmur of complaint in the community. The children are so fond of the school, the benefits of public instruction are now so universally acknowledged, and the whole public sentiment has become so conformed to the practice, that I believe there is quite as little complaint (excepting on account of the invasion of religious freedom before referred to) under the rigorous system of Prussia as under our lax one. One school-officer, of whom I inquired whether this enforced school-attendance were acceptable and popular, replied, that the people did not know any other way, and that all the children were born with an innate idea of going to school.

It should be added, however, that parents are not obliged to send their children to a *public* school ; if they prefer it, the children may be sent to a *private* school : but they *must* be sent to some one. All teachers, however, of private as well as of public schools, must submit to an examination, and have a certificate of qualification from the government officer.

A very erroneous idea prevails with us, that this enforcement of school-attendance is the prerogative of despotism alone. I believe it is generally supposed here that such compulsion is not merely incompatible with, but impossible in, a free or elective government. This is a great error. With the exception

of Austria (including Bohemia) and Prussia, almost all the other States of Germany have now constitutional governments. Many of them have an upper and lower house of assembly, like our Senate and House of Representatives. Whoever will attend the Parliament of Saxony, for instance, will witness as great freedom of debate as in any country in the world; and no law can be passed but by a majority of the representatives, chosen by the people themselves. In the first school I visited, in Saxony, I heard a lesson "On Government," in which all the great privileges secured to the Saxon people by their constitution were enumerated; and both teacher and pupils contrasted their present free condition with that of some other countries, as well as with that of their own ancestors, in a spirit of congratulation and triumph. The elective franchise in this and in several of the other States of Germany is more generally enjoyed, that is, the restrictions upon it are less, than in some of the States of our own Union. And yet in Saxony, years after the existence of this constitution, and when no law could be passed without the assent of the people's representatives in Parliament assembled, a general code of school laws was enacted, from the 143d section of which I translate the following. The title is, —

UPON NEGLECT OF SCHOOL-ATTENDANCE. — "1st. In every parish where there is a school-union, there shall be a school-messenger. In large parishes which are divided into many school-districts, every school shall have a particular messenger, besides one for every school-district.

"2d. Excepting on the common vacations, and on those weeks and days when there is no school, the school-messenger must ask the teacher, on every school-day, after the school-hours, what children have been absent without an adequate excuse.

"3d. In places where there is but one school, the school-messenger must ask this question at least twice a week, on Wednesdays and Saturdays, and require an account of the last three days.

"4th. The next morning, not later than an hour before the beginning of the morning school, the school-messenger of every place must go to the parents of the absent and unexcused child, and demand him for the school, or else the reason for his absence. For every such visit, the parent must give the messenger six pfennings.

"5th. If a child does not come after this demand, but remains away unexcused for two days, the school-messenger must take him on the third day, and conduct him to the school. The fee from the parents shall be one groschen.

"6th. A child of a place where there is but one school, who does not come on the Monday or Thursday after the visit of the school-messenger, and remains unexcused, also if he stays away six days without adequate excuse, must be taken by the messenger and carried to the school; and the fee from the parents shall be two groschen.

"7th. If the child stays from the school, with the knowledge of its parents, after being thus carried to it by the messenger, measures for punishment must be taken.

"8th. If the messenger cannot collect his fees, he must apply to the magistrates, whose duty it is to coerce the payment.

"9th. If the parents are actually too poor to pay the same, the magistrates must demand payment quarterly from the school-chest.

"10th. The magistracy must lend their assistance to the messenger, if, without good reason, he is prevented from taking the child to school, or if he is improperly treated while executing the duties of his office."

In many of the German States, the anniversaries of the date of their constitution are celebrated by *fêtes* and shows, by dinners and speeches, as we celebrate our great national festival, the Fourth of July; and yet, in these States, by virtue of laws which the free representatives of a free people have enacted, every child is compelled to attend school!

#### HIGHER SCHOOLS.

This account of the people's schools would be very imperfect did I omit to mention one or two other classes among them, corresponding in grade with our town-schools, or public high-schools. These are the real and burgher schools, which hold the same relation to the elementary schools that our town-schools hold to those of the districts.

The Royal Real School of Berlin — the first in point of date — was formed as early as 1747 by Counsellor Hecker. The epithet "real" is used in contradistinction from "learned." At the time when this school was established, Latin and Greek were the exclusive objects of study in the learned schools; and

the avowed purpose in founding this was, that "not mere words should be taught to the pupils, but realities, — explanations being made to them from models and plans, and of subjects calculated to be useful in after-life." The establishment of this class of schools was the commencement of a great educational reform. Even now, the Germans could afford to barter any quantity of classical annotations, or of home-made Latin and Greek prose or verse, for enough of mechanical skill to make a good household utensil, a good farming-tool, or a good machine. Doubtless, too, their best students would excogitate more philosophically by day if they knew enough to sleep more physiologically at night; but this knowledge Latin and Greek do not give.

The special design of the Burgher school is to prepare young men to become citizens, — that is, to qualify them for the transaction of such municipal or other public affairs as they may be called upon to perform. The man whose duty it may be to build bridges, to construct drains, to lay out streets or roads, to erect public buildings, to pass ordinances for the establishment or regulation of the police, and for the general administration of city or county affairs, should have some special preparation for duties so various and responsible; and the city which fails to educate those young men who are afterwards to perform such duties in her behalf will find, in the end, that their mistakes, mismanagement, and want of economy, will cost a hundred times more than the original outlay which would have qualified them for such offices. In a country like ours, where all the citizens not only elect to office, but are themselves eligible, if education does not fit the great body of the people for the performance of these duties, it is clear that we must be constantly putting valuable trusts into the hands of incompetent trustees.

The above classes of schools are also schools for the useful arts, manufactures, and commerce. In some of them, architecture, engineering, mining, &c., are taught; and the course of studies is susceptible of being enlarged to any extent, until they become complete polytechnic institutions.

I was so fortunate as to arrive at Cologne pending an examination of its Burgher school. One day had already been spent ; but I was present on the morning of the second, before the exercises commenced. A programme of the order of performances, accompanied by remarks and explanations on the course of studies and the methods of instruction, had been prepared for the use of examiners and visitors. It consisted of twenty-four printed folio pages, a fact which shows the degree of attention devoted to the subject. The number and apparent standing and character of the visitors ratified the inference which one would naturally draw from such a fact. From this programme, it appeared that the subjects of examination were religion ; the German (their native) language ; the French, Latin, English, and Italian languages ; history, geography, knowledge of Nature, arithmetic, and geometry ; drawing, calligraphy, and singing, — in all, thirteen branches.

I shall speak only of that part of the examination which I heard.

In arithmetic, after a little time had been spent in expounding the mere relations of numbers, the pupils gave an account of the different weights and measures of the neighboring States ; of the standard value of gold and silver as determined by the laws of different nations ; of the current coins of all the nations of Europe and of the United States of North America. They were then required to change coins of one denomination and country into those of another. After this they were examined in electro-magnetism, having apparatus on which to try experiments. A class of boys from thirteen to seventeen years of age was then examined in the French and English languages. During the exercise in French, *both teacher and pupils spoke in French ; and, during the exercise in English, both teacher and pupils spoke in English.* These exercises consisted in translation, parsing, and general remarks. The teacher's remarks on the construction and genius of the English language would have done credit to a professor in one of our colleges. A want of time excluded examinations in Latin and Italian ; but all that



I saw and heard was performed so well as to create an assurance of ability to sustain an examination in any other branch set down in the programme. After this came declamation in three languages. In this exercise, I observed there was not a single gesticulation, nor any symptom of an internal impulse towards one. The lads took their station behind a table, which they seized with both hands, and held steadfastly until the close.

After the examination was completed, the head teacher occupied half an hour in delivering an address, a part of which was directed to the young men who were about to leave the school, and a part to parents and visitors on their duties to it.\*

In many parts of the Continent, evening schools are kept, which are attended by apprentices and others. In these schools, all branches of useful knowledge are taught. In Paris, I have seen men forty or fifty years of age in attendance, and diligently studying the branches appropriate to their respective occupations. Such schools occupy the place, to some extent, of our debating-clubs and lyceums. The school communicates knowledge; the debating-club and the lyceum suppose the actual possession of knowledge. Where this knowledge does not actually exist, is not the school preferable?

In some of the German States, the law requires apprentices to attend school a certain number of evenings in every week. In one of these States, I was informed that complaint had been made by the apprentices because they were deprived of the disposal of their own time, and were obliged to defray the expense of tuition at school out of their pocket-money. To obviate this complaint, the law was changed. All apprentices were still

\* In a private school in Utrecht, composed of both masters and misses, I heard a lesson in English history, conducted principally in the French language. During the lesson, a boy was called to the blackboard, who traced down in a diagram form, in a manner similar to the great historical charts to be found in Lavoisne's Atlas, a regular succession of the English sovereigns, from the time of Edward III. to the present Queen. How valuable and permanent must history be when learned in this way!

In this school, four languages, the German, Dutch, French, and English, were spoken promiscuously by both teachers and pupils; and each one of these languages seemed to be struggling to obtain its share of attention.

obliged to pay a tuition-fee ; but the government remitted the payment in favor of those who attended, exacting it only of the absentees.

In most, if not in all, the German cities which I visited, I found Sunday schools in active operation. These are established, not, as with us, for the purpose of giving moral or religious, but secular instruction. Their exercises consist mainly in reading, writing, composition, arithmetic, geography, drawing, and so forth. They are attended principally by apprentices, laborers, and others, whose age for attending the elementary schools has passed, and who are engaged, during the week-days, in their respective industrial employments.

From what has been said, it will be observed that there is a remarkable difference between the lads, or youth, of Prussia and our own, in regard to the nature and character of the literary exercises to which they betake themselves after leaving the elementary schools. With us they attend the lyceum, the debating-society, the political reading-room or news-room. There, notwithstanding the excellent instruction they have already received in the school, they seek to enlarge and carry forward their elementary knowledge by attending the evening school and the Sunday school. Their course springs from the idea, that further preliminary knowledge is to be acquired ; ours from the idea, that sufficient preliminary knowledge has already been obtained, — sufficient to qualify them to enter upon the business of life, sufficient for the decision of all social and political questions. Before we give a decided preference to our own course, would it not be well to inquire whether the supposition on which it proceeds is true ?

In Prussia, Saxony, and some other of the German States, schools for further cultivation, as they are called (*Fortbildung-Schulen*), are rapidly increasing.

Having brought to a close what I propose to say respecting the spirit and the methods of instruction prevalent in the German schools, perhaps it may not be wholly useless to others, who may make a similar tour of exploration, if I add, that, after

leaving the north of Prussia and the kingdom of Saxony, I observed a slight falling-off, a declension, in the tone and conduct of the schools. This, however, was slight, until I approached the Rhine. But here, in the Grand Duchy of Nassau, of Hesse Darmstadt, of Baden, and in the cities of Coblenz, Cologne, and Dusseldorf, although the same general system was everywhere in operation, yet its body was not animated and informed by so active and zealous a soul.

The above view of the condition of the Prussian schools, and of the degree of influence they exert upon the national character, would be incomplete without a few general remarks.

The question is sometimes asked, why, with such a wide-extended and energetic machinery for public instruction, the Prussians, as a people, do not rise more rapidly in the scale of civilization ; why the mechanical and useful arts remain among them in such a half-barbarous condition ; why the people are so sluggish and unenterprising in their character ; and, finally, why certain national vices are not yet extirpated.

These questions may be readily answered. *First.* It is a great defect in the *People's* schools of Prussia, that the children leave them at so early an age. At fourteen, when the mind, by blending its own reflections with the instructions of an accomplished teacher, is perhaps in the very best state for making rapid advances, the child is withdrawn from school, and his progress suddenly arrested. The subsequent instruction of the evening school and the Sunday school reaches but a small part of the rural population.

*Secondly.* There is a great dearth of suitable books for the reading of the older children or younger men. Notwithstanding the multitude of publications sent forth annually from the prolific German brain, but very few of them are adapted to the youthful mind ; and that great instrumentality for operating in every place, however secluded or remote, and for elevating every individual, however indigent or obscure, — THE DISTRICT SCHOOL LIBRARY, — has hardly yet been heard of in the kingdom. Hence there is a failure of mental nutriment on which

the common people can thrive. Whenever I mentioned our own plan of school-libraries, it struck all, whether teachers, school-officers, or friends of free and progressive institutions, as one of the grand desiderata for carrying forward the public mind in its career of improvement. I have the happiness to believe that our course on this subject will not only diffuse blessings by its direct agency at home, but will enlarge into a wide circle of beneficence by the effect of its example abroad.

The Prussians have political newspapers ; but these are under a rigorous censorship. There are but few of them, and their size is very small. One of our mammoth sheets would nearly supply a Prussian editor for a year.

*Thirdly.* But the most potent reason for Prussian backwardness and incompetency is this, — when the children come out from the school, they have little use either for the faculties that have been developed, or for the knowledge that has been acquired. Their resources are not brought into demand ; their powers are not roused and strengthened by exercise. Our common phrases, “ the active duties of life ; ” “ the responsibilities of citizenship ; ” “ the stage, the career, of action ; ” “ the obligations to posterity, ” — would be strange-sounding words in a Prussian ear. There, government steps in to take care of the subject almost as much as the subject takes care of his cattle. The subject has no officers to choose, no inquiry into the character or eligibleness of candidates to make, no vote to give. He has no laws to enact or abolish. He has no questions about peace or war, finance, taxes, tariffs, post-office, or internal improvement, to decide or discuss. He is not asked where a road shall be laid, or how a bridge shall be built, although, in the one case, he has to perform the labor, and, in the other, to supply the materials. His sovereign is born to him. The laws are made for him. In war, his part is not to declare it or to end it, but to fight, and be shot in it, and to pay for it. The tax-gatherer tells him how much he is to pay. The ecclesiastical authority plans a church which he must build ; and his spiritual guide, who has been set over him by

another, prepares a creed and a confession of faith all ready for his signature. He is directed alike how he must obey his king, and worship his God. Now, although there is a sleeping ocean in the bosom of every child that is born into the world, yet if no freshening, life-giving breeze ever sweeps across its surface, why should it not repose in dark stagnation forever? /

Many of our expensively-educated citizens will understand *too well* what I mean, in saying, that when they came from the schools, and entered upon the stage of life, they had a *practical* education to begin. Though possessed of more lore than they could recite, yet it was of a kind unavailable in mart or counting-room; and they still had the a, b, c of a business-education to commence. What, then, must be the condition of a people, to the great body of whom not even this late necessity ever comes?

Besides, it was not until the beginning of the present century that the Prussian peasantry were emancipated from a condition of absolute vassalage. Who could expect that the spirit of a nation, which centuries of despotism had benumbed and stupefied, could at once resume its pristine vigor and elasticity?

*Fourthly.* As it respects the vices of the Prussians, the same remark applies to them as to those of all the continental nations of Europe,—they are the vices of the sovereign, and of the higher classes of society, copied by the lower without the decorations which gilded them in their upper sphere. Mr. Laing (the same author before referred to) says, —

“Of all the virtues, that which the domestic family education of both sexes most obviously influences — that which marks more clearly than any other the moral condition of a society, the home state of moral and religious principles, the efficiency of those principles in it, and the amount of that moral restraint upon passion and impulses which it is the object of education and knowledge to attain — is undoubtedly female chastity.

“Will any traveller, will any Prussian, say that this index-virtue of the moral condition of a people is not lower in Prussia than in almost any part of Europe?”

"This," says Mr. Laing, "is a fact not to be denied, when the fruits of this educational system *may be appreciated in the generation of the adults.*" Allowing the accusation to be true,—which, however, so far as it gives to Prussia a criminal pre-eminence over many other Continental nations, may well be questioned,—and can any thing surpass the absurdity of expecting that a deep-seated vice of this description can be extirpated in a single age by the influence of any education, however perfect, or by any other human means of reform whatever? It would be a revolution such as was never yet wrought in so short a period, even by miracles; no, not even under the Jewish theocracy, when men looked to the Omnipotent himself for the execution and the avengement of the laws. Could so fatal a canker in the social body be so easily eradicated from it, the criminality of sovereigns and of the high-born, of princes and of nobles, would be infinitely less than it now is for spreading so virulent a vice among the lower orders by the contagion of their own example, or for allowing its existence by their neglect. The vicious indulgences of the elevated descend through all the grades of society beneath them; and the bitterest drop in the cup of their abominations is that which flows forward, and pollutes the blood of generations yet unborn. Besides, what man of conscientiousness, of an awakened moral sense, can sympathize with denunciations levelled at the poor and ignorant, while those who dwell in high places and give the law to society escape unrebuked? Before the pure spirit of justice, the worst debaucheries and licentiousness that ever reeked in the stews of Athens are less criminal than the amours and obscenities of the gods on Olympus. Throughout the whole history of mankind, the vices of the low have been only *vulgarized* copies and editions of the profligacies of their social superiors,—the coarse penny prints of the illuminated and voluptuous originals of kingly and courtly sensualism.

A proverb has now obtained currency in Prussia, which explains the whole mystery of the relation between their schools and their life. "THE SCHOOL IS GOOD, THE WORLD IS BAD."

The quiescence or torpidity of social life stifles the activity excited in the schoolroom. Whatever pernicious habits and customs exist in the community act as antagonistic forces against the moral training of the teacher. The power of the government presses upon the partially-developed faculties of the youth as with a mountain's weight. Still, in knowledge and in morality, in the intellect and in the conscience, there is an expansive force which no earthly power can overcome. Though rocks and mountains were piled upon it, its imprisoned might will rend them asunder, and heave them from their bases, and achieve for itself a sure deliverance. No one who witnesses that quiet, noiseless development of mind which is now going forward in Prussia, through the agency of its educational institutions, can hesitate to predict that the time is not far distant when the people will assert their right to a participation in their own government. The late king made a vow to his subjects that he would give them a constitution. He survived a quarter of a century to falsify his word, and at last went down to his grave with the promise unredeemed. This was a severer shock to his power than if he had lost half the wealth of his realm. Thousands of his subjects do not hesitate now to declare, that fidelity on his part was the only equivalent for loyalty on theirs; and standing in his mausoleum, amid the costliest splendors of architecture and statuary, — the marble walls around covered with gilded inscriptions in honor of the royal name, — they interpolate a black line upon his golden epitaph, and say, "He promised his people a constitution, but violated his royal faith, and died forsworn."

Some suspicions are entertained that the present sovereign is adverse to that mighty intellectual movement which is now so honorably distinguishing Prussia from most of the nations in Europe. Alike for the fame of the king, and the welfare of humanity, it is to be hoped that these suspicions are groundless. He has the power of gaining as enviable and lasting a renown as any sovereign who ever sat upon an earthly throne. The opportunity is before him, the materials are in his hands.

Through a peaceful revolution by knowledge, he can save a fiery revolution by blood. He can liberalize the institutions of his people, elevate their condition, and continue to enlighten their minds, until they shall become a luminary in the heart of Europe, shedding its benignant beams upon surrounding nations. One of his ancestors has been surnamed "the Great," because he aggrandized his country in war, — because he ravished the population and seized the territory of other nations, and added them to his own; but this monarch may win a purer and a nobler fame, — not by the captives or the domain which he shall take, by conquest or spoliation, from the nations around him, but by the example and the enlightenment which he shall be instrumental in giving both to contemporaries and to posterity.

#### CORPORAL PUNISHMENT.

I have uniformly made inquiries respecting the use of corporal punishment as a means of order and an incitement to progress in schools.

I need not repeat what was said above (*ante*, pp. 359–60) in regard to corporal punishment in Germany.

In Holland, corporal punishment is obsolete. Several teachers and school-officers told me there was a law prohibiting it in all cases. Others thought it was only a universal practice founded on a universal public opinion. The absence of the Minister of Public Instruction, when I was at the Hague, prevented my obtaining exact information on this interesting point. But, whatever was the cause, corporal punishment was not used. In cases of incorrigibleness, expulsion from school was the remedy.

One of the school-magistrates in Amsterdam told me, that, last year, about five thousand children were taught in the free schools of that city. Of this number, from forty to fifty were expelled for bad conduct. This would be about one per cent.

At Haarlem, Mr. De Vries told me he had kept the same school for about twenty years, that its average number had



been six hundred scholars, that not an instance of the infliction of corporal punishment had occurred during the whole time, and that two only (boys) had been expelled from it as hopelessly incorrigible. He added, that both those boys had been afterwards imprisoned for crime. On seeing the manner of Mr. De Vries, his modes of instruction, and the combined dignity and affection with which he treated his pupils, I could readily believe the statement.

The schools of Holland were remarkable for good order, — among the very best, certainly, which I have anywhere seen. Nor does this arise from any predominance of phlegm in the constitution, or any tameness of soul; for the Dutch are certainly as high-toned and free-spirited a people as any in Europe. This fact may be read in their organization and natural language, as well as learned from their history.

In Hamburg, I visited an institution of a novel character. It was a punishment-school, or school-prison, — a place of instruction and restraint for those children belonging to the poor-schools of the city who commit any aggravated offence. In Hamburg, many poor people receive assistance from the city. One of the conditions of the succor is, that those who receive it shall send their children to the schools provided for them. If a child in these schools commits any trivial or ordinary offence, he is punished in the school in the usual way. But if the transgression is gross, or if he persists in a course of misconduct, he is sentenced by the competent authorities to a prison, or punishment-school (*Strafschule*). Here he must go at eight in the morning, and remain until eight in the evening. A part of the day is spent in study, a part in work. I saw the children picking wool. There were twenty-one boys in one room, and eleven girls in another. The school was in the third story of a building; and near the schoolrooms were small and wretched bed-rooms, where those whose sentence covered the night, as it sometimes did, were compelled to sleep.

The children were usually sentenced to so many stripes, as well as to so many days' confinement; and the teacher kept a

book, as a jailer keeps a record of his prisoners, in which the case of each child was recorded. At the expiration of the sentence, the children return to the school whence they came. Instances of a second, and even of a third commitment sometimes occur.

While I was stopping at the punishment-school, the hour of dinner arrived. All the boys left their schoolroom for one of the adjacent rooms, and all the girls for another. They arranged themselves in groups of four each, on the opposite sides of a long table. A bowl of bean-porridge was set in the centre of each group, and to each child was given a large, round, coarse wooden spoon. The teacher entered a sort of pulpit, and said grace, after which the children ate their homely meal. There was very little of indecorous behavior, such as winking or laughing in a clandestine manner; but the sobriety appeared to me to come more from fear than from repentance. One of the rules was, that, during the twelve hours of daily confinement, the children should have no communication with each other; but it happened here, as it has in many other cases where all communication is interdicted, that it is carried on clandestinely, or by stealth, — an evil much greater than any which can result from allowed intercourse.

The highest tension of authority which I anywhere witnessed was in the Scotch schools. There, as a general rule, the criminal code seemed to include mistakes in recitation as well as delinquencies in conduct; and, where these were committed, nothing of the "law's delay" intervened between offence and punishment. If a spectator were not vigilant, there might be an erroneous answer by a pupil, and a retributive blow on his head by the teacher's fist, so instantaneous and so nearly simultaneous as to elude observation. Still the bond of attachment between teacher and pupils seemed very strong. It was, however, a bond founded quite as much on awe as on simple affection. The general character of the nation was distinctly visible in the schools. Could the Scotch teacher add something more of gentleness to his prodigious energy and

vivacity, and were the general influences which he imparts to his pupils modified in one or two particulars, he would become a model teacher for the world.

In England, as there is no national system, nor any authoritative or prevalent public opinion towards which individual practice naturally gravitates, a great diversity prevails on this head. In some schools, talent and accomplishment have wholly superseded corporal punishment; in others, it is the all-in-all of the teacher's power, whether for order or for study. I was standing one day, in conversation with an assistant teacher, in a school consisting of many hundred children, when, observing that he held in his hand a lash or cord of Indian rubber, knotted towards the end, I asked him its use. Instead of answering my question in words, he turned round to a little girl sitting near by, perfectly quiet, with her arms, which were bare, folded before her and lying upon her desk, and struck such a blow upon one of them as raised a great red wale, or stripe, almost from elbow to wrist.

In some of the proprietary and endowed schools of England, the practice of solitary confinement still prevails. In large establishments at Birmingham, Liverpool, &c., I saw cells, or solitary chambers, four or five feet square, for the imprisonment of offenders. These were not for mere children, but for young men. I have seen a lad fifteen or sixteen years of age, dressed in a cap and gown, — the scholastic uniform of England, — a prisoner in one of these apartments.

In some of the private establishments at Paris, an extent of *surveillance* over the conduct of students prevails of which we have no idea. This is intended to supersede the necessity of punishment by taking away all opportunity for transgression. Some of the private schools are subsidiary to the colleges, — that is, the master of the private school has the general charge and superintendence of the students, maintains them at his own house, instructs them himself, or by his assistants, at home, but takes them daily to the college, where their lessons are finally heard by professors. I attended, one morning, the

opening of the College Bourbon, in Paris. At eight o'clock, the private teachers came, followed by their pupils marching in procession. All entered a large square, or court, enclosed on all sides, except the gateway, by the college-buildings. Soon after, the roll of a drum was heard, at which all the students arranged themselves in classes. At a second drum-beat, they marched to their recitation-rooms. The teachers then returned home; but, at the end of the college-exercises, they were to be in attendance again, to take back their charge in the same way as they had conducted them thither. To us this would seem singular, because many of the students had already passed the age which we call the age of discretion. By the invitation of one of the teachers, I accompanied him home. The collegians were only the older pupils in his school, and I wished to see the rest of his establishment. It was laid out on a most liberal scale as to play-grounds, schoolrooms, dormitories, kitchen, &c., and was in an excellent condition of order and neatness. The arrangement was such, that he could inspect all the play-grounds while sitting in his study; in this particular resembling those prisons where all the wards can be inspected from a central point. But this was not all. As I passed round to see the several schoolrooms, I observed that a single pane of glass had been set into the wall of each room, so that the principal, or any one deputed by him, could inspect both the class and its teacher without a moment's warning. This was pointed out as one of the distinguishing excellences in the construction of the rooms. It was stated also, that, in order to save the younger from contamination by associating with the older, there was not only an entire separation of them in the schoolrooms, but also in the play-grounds and sleeping apartments; and it was added further, that if two brothers of different ages, and belonging to different classes, should attend the school at the same time, they would not be allowed to see each other. I afterwards saw the same contrivances for inspection, not only in other schools, but in the Royal College of Versailles, a very distinguished institution.

freedom of will, with a sacrifice beforehand, and a strict accountability afterwards.

At all times and in all countries, the punishment of scholars is the *compulsion* of children by parents at home and the teacher in school. Where there is no compulsion, there must be more on the

#### EMULATION

In the Prussian and Saxon schools, one of the motive-powers to study is a passion inflamed to an insupportable degree. It is formally told that its employment was necessary, and that the best authorities throughout the world discountenanced rather than encouraged it as the qualifications of teachers found less necessary to enlist this passion than the great idea of education — the Christian character and habits — had been developed, emulation had been found an influence.

France and Scotland are the two countries where emulation between pupils, as one

In one of the *pensions*, or boarding-schools, of Paris, I was struck by the sight of a large number of portraits of young men. These were hung around the walls of the principal's room, which was a large apartment, three of whose sides were nearly covered by them. They were the portraits of those pupils of the school who had afterwards won prizes at a college-examination. The name of the pupil, the year, and the subject-matter on which he had surpassed his competitors, were inscribed respectively beneath the portraits. In the room of the head of the Royal College at Versailles, I also saw the portraits of those students of the college who had won prizes at the university. This display, and the facts connected with it, speak volumes in regard to the French character, and the motive-powers under which not only the scholars, but the nation works. A brief account of a single phasis of this system, — for it is reduced to a system, — if not particularly interesting, may be instructive.

The *pensions*, or boarding-schools, are equivalent to our select or private schools. Their patronage depends upon their reputation; and that reputation is mainly graduated by the number of distinguished scholars they send out. Hence to send pupils to the college who gain prizes for scholarship brings celebrity to the school, and emolument to the master. To obtain talented boys, therefore, becomes a grand object with the masters of the pensions. For this purpose, careful inquiries are made, and sometimes agents are employed to search out lads of promise, and bring them to the school. In some instances, not only tuition, but the whole expense of board, lodging, &c., is gratuitously furnished; and, in extraordinary cases, a pecuniary bounty beyond the whole expenses of the pupil has been given. It may be said that this has a good effect, because it searches out the latent talent of the country, and suffers no genius to be lost through neglect. But here, as everywhere else, the great question is, whether the principle is right; for no craft of man can circumvent the laws of Nature, or make a bad motive supply the place or produce the results

of a good one. The teachers do not supply these facilities, or encourage this talent, from benevolence. It is speculation. It is pecuniary speculation ; and, if they did not anticipate a richer return for their outlay when invested in this manner than when used in a legitimate way, they would not incur such extraordinary trouble and risk. Hence they devote themselves in an especial manner to the training of these prize-fighters, while other pupils suffer a proportional neglect. The very children, therefore, who are attracted to the school in consequence of its celebrity, are defrauded of their share of attention, in order that the reputation of the school, for which they have been made victims, may induce others to join it, to be made victims in their turn. Thus the system prospers by the evil it works. There is the same ambition among the colleges to win the prizes of the university. The day of examination, when these prizes are awarded, is one of great pomp and ceremony. The Minister of Public Instruction and other high official dignitaries usually attend ; the king himself has sometimes been present in person ; and it is a standing rule that the successful competitors are invited to dine at the royal table.

Who that is conversant with the history of France does not see how much of her poverty, her degradation, and her suffering, even in the proudest periods of her annals, is directly attributable to this inordinate love of praise ? and especially how much of the humiliation of later times — when the charm of her invincibility was broken, and she was obliged to ransom herself from the grasp of her conquerors by gold wrung from her toiling millions — is directly traceable to the predominance in her character of this love of applause ? It was this blind passion for glory which created Bonaparte, and which sustained him not less faithfully in all his vast schemes of wickedness than in his plans for improvement. “ Had the Romans not been sheep, Cæsar had not been a wolf.”

Among all the nations of Christendom, our own is, perhaps, second only to France in the love of approbation as a prompter and guide to action. Ought we, then, to cultivate this passion,

already of inordinate growth, by the use of emulation in our schools?

On a former page (*ante*, p. 281), when speaking of the modes of instruction in the Scotch schools, I have incidentally described the skill and power with which their teachers wield the lash of emulation. I recur to the subject again, only to observe, that this motive is not confined in Scotland to the lower grades of schools, but bears equal sway in colleges and universities; that it is not employed in imparting secular knowledge only, but is an instrument equally welcome and made equally efficient in giving religious instruction.

Whatever one may think of employing such a motive in matters purely intellectual, I cannot believe that a religious lesson like the following — of which I give an exact account as I heard it — will fail of shocking its hardest defender: —

*Teacher.* What sort of death was denounced against our first parents for disobedience?

*1st Pupil.* Temporal death.

*T.* No (and pointing instantaneously to the second).

*2d P.* To die.

The teacher points to the third, crying, “Come away!” — and then to the fourth. A dozen pupils leap to the floor, a dozen hands are thrust out, all quivering with eagerness.

*4th P.* Spiritual death.

*T.* Go up, *Dux* (that is, take the head of the class).

And so of the following, from the Westminster Catechism, which, with all the proofs, is committed to memory: —

*Teacher.* What is the misery of that estate whereinto man fell?

*Pupil.* All mankind, by their fall, lost communion with God, are under his wrath and curse, and so made liable to all the miseries of this life, to death itself, and to the pains of hell forever (giving the proofs).

*T.* What sort of a place is hell?

*P.* A place of devils.

*T.* How does the Bible describe it?



1st P. (Hesitates.)

T. Next. Next. Next.

5th P. A lake of fire and brimstone.

T. Take 'em down four.

And thus, on these awful themes, a belief and contemplation of which should turn the eyes into a fountain of tears, and make the heart intermit its beatings, there is the same ambition for intellectual superiority as on a question in the multiplication-table. There is no more apparent solemnity in the former case than in the latter.

Nor is this mode of treating sacred themes confined to the schools. In the universities, money is employed to stimulate theological effort; and a sordid, financial aspect is given to the holiest subjects. For instance, in looking over the published list of prize questions in the Glasgow University for the last two or three years, I find the following offers:—

“The University Silver Medal, for the best Essay on the Analogy of the Mosaic and Christian Dispensations.”

Other prizes, of various values, are offered for the best essay on such subjects as the following:—

“For the best Lecture on 1 John iii. 1–6. All students of divinity in this university, during the session 1843–44, may be competitors.”

“For the best Essay on the Goodness of God, by students of the third and fourth year.”

“For the best Discourse on John xiv. 27.”

“For an Essay on the Character of Christ.”

“For the best specimen of reading the Holy Scriptures.”

“For the best Lecture on the 35th chap. of Isaiah.”

“Prize for Essay from students of the second year; subject, ‘The Personality of the Holy Ghost.’”

Thus the sordidness of worldly motives is forever mingled with the purity of sacred themes. Men are addressed as though piety dwelt in the purse, and not in the heart; and the holiness of God’s nature and the sanctity of the divine commands are flung wantonly into the ring, to be fought for, with dialectic

weapons, by hired wrestlers and prize-fighters. What value would the New Testament retain in our eyes, had the Gospels and the Epistles been prize-essays, penned by money-loving disciples and apostles for so many Jewish shekels or talents ! Under the influences which God and Nature are shedding around us, the heart may be trained to a moral intrepidity that will bear martyrdom in the cause of truth, or to an avarice that will sell its Redeemer for thirty pieces of silver. Which class of these motives ought the great literary institutions of a country, in all ways, to foster ?

#### MORAL AND RELIGIOUS INSTRUCTION.

It has been an object of paramount interest with me, throughout my whole tour, to learn in what manner and to what extent moral and religious instruction are given in schools. In addition to the inherent interest which belongs to the subject itself, the great variety of practice existing abroad promises to throw much light upon our course of proceedings at home. The statutes of Massachusetts relative to public instruction, while they prohibit the inculcation upon school-children of any such religious views as "favor the tenets of any particular sect of Christians," provide guaranties for the moral character of teachers, and prescribe their duties in the following comprehensive and noble language : —

"It shall be the duty of the president, professors, and tutors of the University at Cambridge, and of the several colleges, and of all preceptors and teachers of academies, and all other instructors of youth, to exert their best endeavors to impress on the minds of children and youth committed to their care and instruction the principles of piety, justice, and a sacred regard to truth, love to their country, humanity and universal benevolence, sobriety, industry and frugality, chastity, moderation and temperance, and those other virtues which are the ornament of human society, and the basis upon which a republican constitution is founded ; and it shall be the duty of such in-

structors to endeavor to lead their pupils, as their ages and capacities will admit, into a clear understanding of the tendency of the above-mentioned virtues to preserve and perfect a republican constitution, and secure the blessings of liberty, as well as to promote their future happiness; and also to point out to them the evil tendency of the opposite vices."

The aim of our law obviously is, to secure as much of religious instruction as is compatible with religious freedom. Let us see how our policy in this respect compares with that of other countries.

In Ireland, a National Board of Education has existed for twelve years, having been constituted in 1831. It is founded on the principle of religious tolerance and conciliation, as between the two great sects into which that country is divided. Some of the most distinguished men, lay and clerical, of both the Protestant and Catholic communions, compose it. In the letter of the Chief Secretary for Ireland, which is the charter and constitution of the Board, its object is expressed in the following words: "To superintend a system of education, from which should be banished even the suspicion of proselytism, and which, admitting children of all religious persuasions, should not interfere with the peculiar tenets of any." To exclude all possible occasion for jealousy, the Board require "that no use shall be made of the schoolrooms for any purpose tending to contention, — such as the holding of political meetings in them, or bringing into them political petitions or documents of any kind for signature; and that they shall not be converted into places of public worship. The commissioners require the schoolrooms to be used exclusively for purposes of education."

Another of the standing regulations is as follows: —

"The commissioners regard the attendance of any of their teachers at meetings held for political purposes, or their taking part in elections for members of parliament, except by voting, as incompatible with the performance of their duties, and as a violation of rule which will render them liable to dismissal."

All religious instruction is expressly prohibited in the schools;

and this prohibition includes "the reading of the Scriptures," "the teaching of catechisms," "public prayer," and "all other religious exercises:" but separate hours are set apart, in which all the children receive religious instruction from the clergymen of their respective denominations; the principle being to give combined literary and moral with separate religious instruction.

In every schoolroom, a copy of the following "General Lesson," prepared by that distinguished and excellent prelate, Dr. Whately, the Protestant Archbishop of Dublin, is to be conspicuously hung up; and all teachers are required to inculcate its principles upon the children under their charge.

"Christians should endeavor, as the Apostle Paul commands them, to 'live peaceably with all men' (Rom. xii. 18), even with those of a different religious persuasion.

"Our Saviour, Christ, commanded his disciples to 'love one another.' He taught them to love even their enemies, to bless those that cursed them, and to pray for those who persecuted them. He himself prayed for his murderers.

"Many men hold erroneous doctrines; but we ought not to hate or persecute them. We ought to seek for the truth, and to hold fast what we are convinced is the truth; but not to treat harshly those who are in error. Jesus Christ did not intend his religion to be forced on men by violent means. He would not allow his disciples to fight for him.

"If any persons treat us unkindly, we must not do the same to them; for Christ and his apostles have taught us not to return evil for evil. If we would obey Christ, we must do to others, not as they do to us, but as we would wish them to do to us.

"Quarrelling with our neighbors and abusing them is not the way to convince them that we are in the right, and they in the wrong. It is more likely to convince them that we have not a Christian spirit.

"We ought to show ourselves followers of Christ, who, 'when he was reviled, reviled not again' (1 Pet. ii. 23), by behaving gently and kindly to every one."

Under the auspices of this Board, more has been done within the last twelve years for the education of the Irish nation than had been effected for a century before under a system whose instruments were coercion, imprisonment, banishment, and

death. On the 21st of March, 1843, when the Board issued its last report, 2,721 schools had been established, in which 319,792 scholars were in a course of education ; and this number was rapidly increasing. At this date, the Board had established a Normal School, at which a thousand teachers had been educated ; had prepared a complete series of school-books ; had digested a code of regulations for the whole system ; and notwithstanding the novelty of the subjects, and the number and delicacy of the questions to be settled, as between opposing parties in religion and politics, not a single protest had been entered upon its records, nor had any schism disturbed the harmony of its members.

In Holland, all doctrinal religious instruction is excluded from the schools. The Bible is not read in them. Children are permitted to withdraw at a certain hour, to receive a lesson in religion from their pastors ; but this is not required. It is optional to go or remain.

In England, as there is neither law nor system on the subject of education, each teacher—with the exception noticed below—does as he pleases. In the schools sustained by the Church, the views of the Church, both as to religious doctrine and Church government, are taught ; and sometimes, though not always, in the schools of the Dissenters, their distinctive opinions are inculcated. There are, however, a few other schools, which are established upon a neutral basis, as between opposing sects. In these, the common principles and requirements of morality, and all the preceptive parts of the gospel, as contradistinguished from its doctrinal, are carefully inculcated. The Harp Alley School, in London, is a good specimen of this class. This school contains children of Churchmen and Dissenters, of Catholics and Jews. The teacher told me, that though himself a Churchman, yet, being placed there to educate children of all denominations, he did so with entire impartiality, and without their knowing what his own views might be.

There is one large class of schools, — technically called

Grammar Schools, because they were established to give instruction in the Greek and Latin languages, whose annual income amounts to about £100,000 (nearly \$500,000), — which, by construction of law, are held to be so far under the jurisdiction of the Church, that the masters must be licensed by an archbishop or bishop, and must take the oath and make the subscriptions and declarations which are recited in the license.

The form of the ordinary's license is as follows: "We give and grant to you, A. B., in whose fidelity, learning, good conscience, moral probity, sincerity, and diligence in religion, we do fully confide, our license or faculty to perform the office of master of the Grammar School at —, in the county, &c., to which you have been duly elected, to instruct, teach, and inform boys in grammar and other useful and honest learning and knowledge in the said school, allowed of and established by the laws and statutes of this realm; you having first sworn in our presence, on the Holy Evangelists, to renounce, oppose, and reject all and all manner of foreign jurisdiction, power, authority, and superiority, and to bear faith and true allegiance to her Majesty Queen Victoria, &c.; and subscribed to the thirty-nine articles of religion of the United Church of England and Ireland, and to the three articles of the thirty-sixth canon of 1603, and to all things contained in them; and having also, before us, subscribed a declaration of your conformity to the Liturgy of the United Church of England and Ireland as is now by law established. In testimony," &c.

In Scotland, although there is no law prescribing the quality of religious instruction to be given, yet there is a public opinion not less authoritative than law, — a public opinion, indeed, whose peremptory demands are more sure to be obeyed without the sanctions of law than a law would be without the exactions of this public opinion.

After the particular attention which I gave to this subject, both in England and Scotland, I can say, without any exception, that in those schools where religious creeds, and forms of faith, and modes of worship, were directly taught, I found the

common doctrines and injunctions of morality, and the meaning of the preceptive parts of the gospel, to be much less taught, and much less understood by the pupils, than in the same grade of schools, and by the same classes of pupils, with us.

Probably, however, I can give a better notion of this subject by relating a few instances from my own observation, just as they occurred. But, for this purpose, I shall quote only from schools of a high, or, at least, of a very respectable character ; as it would be uninstructional on such a subject to take specimens from those of a low grade.

In a school of high standing, a few miles from London, after the teacher had gone through with his exercises in the common branches, I requested him to give me a specimen of his manner of teaching the social virtues, such as regard to truth, an observance of the rights of property, &c. Upon this, he turned to the older class of scholars, and said, "What instances of lying are given in the Bible?"

A. The case of Ananias and Sapphira.

Q. Against whom was that crime committed?

A. Against the Holy Ghost.

Q. What doctrine of the Bible does this prove?

A. The doctrine of the Trinity.

Here he stopped, as though the subject of lying were exhausted. He then took up another subject, and proceeded as follows : —

Q. Do you recollect any case in the Scriptures in which stealing is condemned?

A. The case of Achan.

Q. Any case of Sabbath-breaking?

A. The man who gathered sticks on the Sabbath, and was stoned to death.

Here again he stopped. "But," said I, "how do you inculcate an observance of the Sabbath at the present day? Your boys know very well that Sabbath-breakers are not stoned to death, in our time, anywhere ; and, if the observance of that day is to

rest upon the fear of being stoned to death, it will not be observed." He replied, that he taught from such examples as were to be found in the Bible, and knew no other way. He said the same about the vice of lying. In this school, I heard a lesson of an hour's length, in which the teacher read passage after passage from the liturgy, called upon the pupils to give an exposition of the meaning of each, and to quote those texts of Scripture which were supposed to prove it. The answers were given with great promptness, and showed a familiar acquaintance with the language of the Bible.

In a school in Edinburgh, in which the intellectual exercises were conducted in a most efficient manner, the teacher put the New Testament into my hands, and requested me to select any passage I might choose, from either of the four Gospels, or from the Epistle to the Hebrews, and then to read the passage selected to a class of about eighty boys and girls, who were, as I should judge, from eleven to thirteen years of age. At the same time, a Testament was given to each of the class. Accordingly, I opened the book at random, and read the first verse upon which my eye fell. Before I had finished the verse, a large number of the class had turned to it in their own Testaments, and announced the book, the chapter, and the number of the verse, which I was reading. Astonished at this, I repeated the experiment, turned backwards and forwards promiscuously, again and again; but in no case were they at fault. In every instance, before, or at least as soon as, I had finished the reading of a verse, a considerable number of the class, often a majority of them, held up their Testaments, and showed or mentioned book, chapter, and verse. It took them no longer to find the verse than it did me to read it. I then tried them by beginning in the middle of a verse, selecting verses whose division was such that each clause presented a substantive idea. This made no difference, — so completely had they committed to memory not only every verse, but the order of all, and the place where each one was to be found.

Amazed at this command of the Bible by children so young,



I said to myself, "How happy if their ideas and sentiments of duty correspond with their verbal knowledge of the great source whence they derive its maxims!" Accordingly, I requested the teacher to examine them on points of common morals, or social, every-day duties and obligations. He did not seem fully to comprehend my meaning, and therefore requested me to explain what I meant by a practical example. I then asked the class what they understood by the word "honesty," or "what it is to be honest." After a little delay, one of the class replied, "To give money to the poor;" and to this definition all assented. I then inquired what they understood by the word "conscience." Several replied, "It is the thinking principle." I asked if all agreed to that, and all but one gave token of assent. This one, — a remarkably intelligent-looking boy, — observing that I was not satisfied with the reply, said, "Conscience tells us what to do;" and, when I rejoined, "Does it not tell us also what not to do?" he assented. I requested the class to give me an instance of what was meant by "lying." All exclaimed, as with one voice, "Ananias and Sapphira;" but beyond this, though I pressed them for some time, they could present no combination of circumstances which would answer the description of lying.

When, however, I stated cases circumstantially, as whether, if a traveller were to call to me in a noisy street, or when I was in a field, at some distance from the way-side, to ask me the direction to a place, and, without speaking, I should point in a direction opposite to the true one; whether, if I were standing by, heard such a question put, and saw such a sign made, without interfering; whether, if I were a witness in a court of law, and should tell the truth literally and exactly, without any equivocation or reservation, and should subsequently perceive, by what the advocate or judge might say, that I had been misunderstood, but should not correct the mistake because it was in favor of the party whom I wished to prevail in the cause, — when I asked them whether these would not be cases of lying, they appeared perfectly able to compre-

hend the point on which the falsity would turn. So in the case of Judas kissing Jesus, they understood that this act was a *lie*, but did not know that it was *perfidy* also, nor understand the injury which such an act must inflict upon the cause of truth generally, by casting suspicion upon one of its liveliest tokens. The children had been admirably trained in most respects; but their minds seemed not to have been turned in this direction.

In another school where the same general conversation was held, and where the case of Ananias and Sapphira seemed to exhaust the pupils' knowledge respecting falsehood, I said to the teacher, "But your children know that liars, nowadays, are not struck down dead as a punishment for lying. What further explanations do you give to show them the deformity and mischievousness of lying, and the beauty and utility of truth?" — "You remind me," said he, "of a case that actually occurred in my school a few days ago. I detected a boy in a falsehood, and publicly punished him for it. The next morning, a schoolmate of his, who had known the whole transaction and its results, came to me and said, 'I have been thinking.' I asked what he had been thinking. He said, 'You once told us that God was the same, yesterday, to-day, and forever. Now, if this is true, why did not God kill this boy for lying, as well as Ananias and Sapphira?' I was not able," said the teacher, "to answer him."

In the Prussian (Christian) schools, only two systems of religion prevail,—the Protestant-Evangelical and the Catholic. The parents have an option between these; but one or the other must be taught to their children. If the parents are all of one religious denomination, the teacher generally gives the religious instruction. Where a diversity of creeds exists, and the teacher is Protestant, he usually gives religious instruction to the Protestant part of the children; and a Catholic priest attends at certain hours, to give instruction, in a separate apartment, to the Catholic children. A similar arrangement prevails in regard to the Protestant children, where the teacher of a mixed school

is Catholic. At fourteen,—the common termination of the school-going age,—the Protestant children usually have sufficient knowledge of the Bible to be confirmed,—that is, to become members of the church, and, of course, communicants at the Eucharist. This confirmation and membership of the church depend on the amount of their Bible knowledge, not on the state of their religious affections. The priest examines and approves; or, if he finds the pupils deficient in Bible knowledge, they are remanded to their former school, or sent to a Bible school. In a Prussian city, I was taken to a school of about twenty boys and girls, from fourteen to sixteen or seventeen years of age, who were doing nothing but reading the Bible. They were vagrants from other places, and were as vicious and perverse a looking company of children as I ever saw. All over their countenances, in characters too legible to be mistaken, were inscribed the records of malignity and evil passions. They had not obtained the amount of Bible knowledge requisite for confirmation, and admission into the church, and were therefore sent here to acquire it. The day for a new examination was near by, at which time the greater part of them would probably be received into the church. Such reception is indispensable, because, without a certificate of confirmation from the priest, it would be nearly or quite impossible for any one to obtain a place as a servant, apprentice, or clerk, or even to get married.

The consequence of all this is, that the whole community are members of the church. The gamester, in a country where gaming is a national vice; the drunkard, the thief, the libertine, the murderer; alike the malefactors who are in prison under the sentence of the law, and the crafty and powerful who by force or fraud have eluded its judgments,—all are members of the church of Christ!—such ascendancy has faith over practice in the eye of the law, so much more important is the legal name by which the tree is called than the fruits which it bears!

No inconsiderable number of the teachers in the Prussian

schools, gymnasia, and universities, are inwardly hostile to the doctrines they are required to teach. I asked one of these how he could teach what he disbelieved, and whether it did not involve the essence of falsehood. His reply was, "It is a lie of necessity. The government compels us to do this, or it takes away our bread." While human nature remains as it is, is not such the natural consequence of a compulsory religion? Though every one must condemn as flagrantly wrong what is here done under the plea of necessity, yet is it not clear that the government which creates this supposed necessity is a hundred times more guilty than the victim who yields to the temptation? When the mass of a people are ignorant, they easily become the passive subjects and recipients of a compulsory religion, however false; but, when the people become enlightened, their tendency is to recoil from a compulsory religion, even though it be true.

The enforcement of a speculative faith, or, at least, of an acknowledgment of one, upon minds that discard it, is doubtless one of the principal reasons of the rapid spread of infidelity in that country. This setting a snare to the conscience by tempting any man to practise what he condemns, or to affirm what he disbelieves, is also one of the greatest corrupters of public morals; and by allowing and enforcing two different religions, the government proclaims its own absurdity, for both cannot be right. Two opposites may both be wrong; but, while truth remains *one* and the *same*, it must be obvious to the simplest understanding that both cannot be right. What faith or trust can children put in what is taught to them as positively and certainly true, when they know that views diametrically opposite are taught with equal positiveness and dogmatism, *and by the same authority*, to their play-fellows; when they know, that, if one part of the instruction is loyal to the majesty of truth, the other is treasonable to the same majesty? Would not this be the case if a parent were to teach one faith to a part of his children, and an opposite faith to the rest? and must not the same consequences follow where a gov-

ernment, claiming to be paternal, does the same thing? In the same schoolhouse, under the same roof, I have passed from one room to another, separated only by a partition-wall, where different religions, different and irreconcilable ideas of God and of his government and providence, of our own nature and duties, and of the means of salvation, were taught to the children by authority of law; and where a whole system of rites, books, teachers, officers, had been provided by the government, to enforce upon the children, *as equally worthy of their acceptance*, these hostile views. Everlasting, immutable truth — not merely the image, but the essence of God; not merely unchanging, but, in its nature, unchangeable and immortal — was made to be one thing on one side of a door, and another thing on the other side; was made, after crossing a threshold, to affirm what it had denied, and to deny what it had affirmed. The first practical notion which any child can obtain from such an exhibition — and the brightest minds will obtain it earliest — is of the falsity of truth itself, or that there is no such thing as truth; and that morals and religion are only convenient instruments, in the hands of rulers, for controlling the populace. Such a conclusion must be an extinction of the central idea of all moral and religious obligation.

I shall never forget the impression made upon my mind by a conversation with a school-officer of great intelligence and high authority, — the inspector of the schools of a large circle of territory, — to whom I explained the neutrality of our school-system as between different religious sects. He expressed the greatest astonishment at the fact, and thought it to be impossible that any government could stand which did not select some form of religion, and enforce its adoption, through the schools and the pulpit, upon the whole community. On further conversation, I found him to be a thorough Pantheist, and a disbeliever in the divine authority of the book, whose use, and the inculcation of whose doctrines as held by the State, he was enjoining upon all the schools under his charge.

Wherein does the teaching of two hostile religions, by au-

thority of law, differ from teaching contradictory theories in science, only as the former subject should be approached with more caution and reverence than the latter? Suppose some weak but proud mortal, having, by means of birth or any other accident, obtained a control over the destinies of men, should decree that half the children in his kingdom should be taught the Ptolemaic system of astronomy, according to which the sun revolves round the earth, and the other half, the Copernican system, according to which the earth revolves round the sun, — could he retain the respect of any intelligent subject, either for his systems or for himself? Upon portions of the vegetable kingdom, the Creator has inscribed certain visible marks or tokens, by means of which the plants that bear them may at once be recognized as belonging to a poisonous family. To the scientific eye, these marks are equivalent to the words, “Beware of poison,” written on the plant itself. Suppose a law were promulgated, that half the children of a realm should be taught that all plants having five stamens and one petal, and whose leaves are rough in texture, and of a livid green in color, should be accounted sanative, and be adopted into the pharmacopœia of the physician ; and, in certain prescribed cases, should be administered to all patients by their medical advisers. Aside from the actual and immediate havoc of health and life which would be caused by a public teaching and common practice founded upon such laws, would not the clearest, most powerful, and most independent minds in the community be tempted to treat the whole subject with contempt and derision? Are not the laws of the Creator as certain, as infallible, in one of his kingdoms as in another? The only difference is, we know the laws of one kingdom better than we do those of another. It is a difference, not in the certainty of the Creator's laws, but in the amount of the creature's knowledge. Where these laws are already known, no human authority, no sanction of pains and penalties, can uphold or commend them like their own inherent and indestructible truth. Where they are not yet known, especially when great and good men still entertain

conflicting views respecting them, is it not the wisest part of wisdom to concentrate whatever of talent, of virtue, of religious motive, there may be in the community, to ascertain with more certainty what they really are? And is not a higher education of the intellect and conscience of the rising generation one of the most promising of these means?

To a vast extent, abroad, I found religion to be used for political purposes, — not to enthrone a Deity in the heavens, but a king over a state, — not to secure the spontaneous performance of good works to men, but the blind submission of person and property to the ruler. It will, therefore, be readily understood, that I have returned from this survey of foreign systems with a more exalted appreciation and a more heartfelt attachment for our own. The letter and spirit of our law respect the right of conscience in each individual. Our school-system is designed to promote the development and growth of the understanding, to cultivate upright and exemplary habits and manners, to quicken the vision of conscience in its discriminations between right and wrong, and to inculcate the perfect morality of the gospel; while it reverently forbears to prescribe, by law, the belief which men shall profess respecting their Maker. This belief it leaves to the right of private judgment, and the sense of private responsibility. Least of all does it scandalize truth by setting up different images of its one and indivisible Being and Essence, and then commanding either old or young to bow down and do homage to its discordant representations. The time has probably gone by, in all parts of Christendom, when the dungeon, the rack, and the fagot will be resorted to as instruments for the propagation of supposed truth, or the suppression of supposed heresy; but, though the mode may be different, is not the spirit the same, and the intrinsic wrong as great, when any one man, or class of men, attempts to enforce its own religious views upon the children of another man, or class of men, by penal enactments, or civil disabilities, or social privations of any kind? The form of the oppression may be changed, in accordance with

the milder spirit of the age ; but the innate and ineradicable injustice remains the same.

Whatever may be the especial object of the American citizen in going abroad, still, if his mind is imbued with the true spirit of the institutions of his own country, he cannot fail, in traveling through the different nations of Europe, to find material for the most profound and solemn reflection. There is no earthly subject, in its own nature, of higher intrinsic dignity and interest than a contemplation of the different forms into which humanity has been shaped by different institutions. This interest deepens when we compare our own condition with the contemporaneous condition of other great families of mankind. Tracing back, by the light of history and philosophy, these respective conditions to their causes in some period of antiquity more or less remote, we behold the head-springs of those influences which have given such diversity to the character and fortunes of different portions of the race. We are enabled not only to see the grand results which have been wrought out by certain agencies, acting through long periods of time, but we are brought into immediate contact, and we commune, as it were, face to face, with those great principles which bear the future destinies of mankind in their bosom. Whatever now is, whether of weal or of woe, is the effect of causes that have pre-existed ; in like manner, what is to be, whether of glory or of debasement, will result from the causes put in operation by ourselves or others. The past is a unit, fixed, irrevocable, about which there is no longer either option or alternative ; but the future presents itself to us as an infinite of possibilities. For the great purposes of duty and happiness, to-morrow is in the control of the weakest of men ; but yesterday is beyond the dominion of the mightiest prince or potentate, — it is no longer changeable by human or divine power. The future, then, is our field of action ; the past is only valuable as furnishing lights by which that field can be more successfully entered and cultivated. For this purpose, we study



the history of particular parts of the globe, of particular portions of our race, — of Europe, for instance, — for the last thousand or two thousand years ; we learn what manner of men have borne sway ; we discern the motives by which they have been actuated ; we study the laws they have made, and the institutions they have established, for shaping and moulding *their* unformed future. We go to Europe, or, by other means, we examine and investigate the present social, intellectual, and moral condition of its people ; and here we have the product, the grand result, of men, motives, laws, institutions, all gathered and concentrated into one point, which we can now see, just as we see the fabric which comes from a piece of complicated machinery, when the last revolution of the last wheel rolls it into our hands for inspection.

And what is this result ? In a world which God has created on such principles of wisdom and benevolence, that nothing is wanting, save a knowledge of his commands and an obedience to them, to make every human being supremely happy, what amount of that knowledge is possessed, what degree of that happiness is enjoyed ? It is no adequate representation of the fact, to say that not any thing like one-half of the adult population of Europe can read and write in any intelligible manner, and hence are shut out from a knowledge of all history, sacred and profane, and of all contemporary events ; that not one-third are comfortably housed or fed or clothed, according to the very lowest standard of comfort amongst the laboring classes in this country ; that not one individual in five hundred has any voice in the enactment of the laws that bind him, or in the choice of the rulers who dispose of his property, liberty, and life ; and that, excepting in a few narrow and inconsiderable spots, the inalienable right of freedom in religion, and liberty to worship God according to the dictates of conscience, is not recognized or known ; nay, that the claim of any such liberty is denounced and spurned at, and its advocates punished, not only by a denial of the right itself, but by the deprivation of all human rights whatever : all these

facts, deeply as they affect human happiness, greatly as they derogate from human dignity, present no living picture of Europe as it now exists. All this is negation only: it leaves wholly untouched the side of positive, boundless suffering and wrong. In the Europe of the nineteenth century, the incomputable wealth that flows from the bounty of Heaven during the revolving seasons of the year, and is elaborated from the earth by the ceaseless toil of millions of men; that wealth which is wrought out by human labor and ingenuity, in conjunction with the great agencies of Nature, — fire, water, wind, and steam, — and whose aggregates are amply sufficient to give comfort and competence to every human being, and the joys of home and the sacred influences of the domestic circle to every family, — that wealth, by force of unjust laws and institutions, is filched from the producer, and gathered into vast masses, to give power and luxury and aggrandizement to a few. Of *production*, there is no end; of *distribution*, there is no beginning. Nine hundred and ninety-nine children of the same common Father suffer from destitution, that the thousandth may revel in superfluities. A thousand cottages shrink into meanness and want to swell the dimensions of a single palace. The tables of a thousand families of the industrious poor waste away into drought and barrenness, that one board may be laden with surfeits. As yet, the great truth has scarcely dawned upon the mind of theorist or speculator, that the political application of doing as we would be done by is to give every man entire equality before the law, and then to leave his fortunes and his success to depend upon his own exertions.

That there must be governors, or rulers, where there are communities of men, is so self-evident a truth, that it is denied only by the insane. Yet, under this pretext, a few individuals or families have usurped and maintain dominion over almost two hundred millions of men. That a nation must possess the means of defending itself against aggressors, or submit to be vanquished, despoiled, and enslaved, has been

equally obvious. Yet, under pretence of doing this, naval and military armaments are kept up, at incalculable expense; and men are converted into the soulless machinery of war, far more to uphold thrones, and to subjugate all independence of thought and action at home, than to repel assaults from abroad. Religion is the first necessity of the soul; but because every human being, though he were heir to all the glories and profusions of the universe, must still be a wanderer and an outcast until he can find a Supreme Father and God in whom to confide; because of this instinctive outreaching of the soul towards some Almighty Power,—crafty and cruel men have come in, and have set up idols and false gods for its worship; and then, claiming to be the favorites and ministers of Omnipotence, have dispensed the awful retributions of eternity against all questioners of their authority, and brandished every weapon in the armory of Heaven, not merely for the slightest offences against themselves, but for the noblest deeds of duty towards God, and of benevolence towards men. Hence, throughout wide regions of country, man is no longer man. Formed in the image of his Maker, the last vestiges of that image are nearly obliterated. He no longer breathes that breath of independent and conscious life that first animated his frame and made him a living soul. The heavenly spark of intelligence is trodden out from his bosom. In some countries which I have visited, there are whole classes of men and women whose organization is changing, whose whole form, features, countenance, expression, are so debased and brutified by want and fear and ignorance and superstition, that the naturalist would almost doubt where, among living races of animals, to class them. Under governments where superstition and ignorance have borne most sway, the altered aspect of humanity is assimilating to that of the brute; but, where resistless power has been trampling for centuries upon a sterner nature and a stronger will, the likeness of the once human face is approximating to that of a fiend. In certain districts of large cities, — those of London, Manchester, Glas-

gow, for instance, — such are the influences that surround children from the day they are brought into the world, and such the fatal education of circumstances and example to which they are subjected, that we may say they are born in order to be imprisoned, transported, or hung, with as exact and literal truth as we can say that corn is grown to be eaten.

Not in a single generation could either the cruelties of the oppressor, or the sufferings of his victim, have effected these physical and mental transformations. It has taken ages and centuries of wrongs to bend the body into abjectness, to dwarf the stature, to extinguish the light of the eye, and to incorporate into body and soul the air and movements of a slave. And the weight and fulness of the curse is this, — that it will require other ages and centuries to efface these brands of degradation, to re-edify the frame, to rekindle in the eye the quenched beam of intelligence, to restore height and amplitude to the shrunken brow, and to reduce the overgrown propensities of the animal nature within a manageable compass. Not only is a new spirit to be created, but a new physical apparatus through which it can work. This is the worst, — the scorpion sting in the lash of despotism. There is a moral and a physical entailment as well as a civil. Posterity is cursed in the debasement inflicted upon its ancestors. In many parts of Europe, the laws both of the material and of the moral nature have been so long outraged, that neither the third nor the fourth generation will outlive the iniquities done to their fathers.

Again: the population of a country may be so divided into the extremes of high and low, and each of these extremes may have diverged so widely from a medium or standard of nature, that there are none, or but a very small intermediate body, or middle class of men, left in the nation. The high, from luxury and its enervations, will have but small families, and will be able to rear but few of the children that are born to them. The intermediate class, whom affluence has not corrupted, nor ignorance blinded to the perception of consequences, will be

too few in number, and too cautious about contracting those matrimonial alliances which they cannot reputably and comfortably sustain, to contribute largely to the continuation of the species. But the low, the abandoned, the heedless, those whom no foresight, or apprehension of consequences, can restrain, — these, obedient to appetite and passion, will be the fathers and the mothers of the next generation. And no truth can be more certain than this: that after the poor, the ignorant, the vicious, have fallen below a certain point of degradation, they become an increasing fund of pauperism and vice, — a pauper-engendering hive, a vital, self-enlarging, reproductive mass of ignorance and crime. And thus, from parent to child, the race may go on degenerating in body and soul, and casting off, one after another, the lineaments and properties of humanity, until the human fades away, and is lost in the brutal or demoniac nature. While the vicious have pecuniary means, they have a choice of vices in which they can indulge; but, though stripped of means to the last farthing, their ability to be vicious, and all the fatal consequences to society of that viciousness, still remain. Nay, it is then that their vices become most virulent and fatal. However houseless or homeless, however diseased or beggarly, a wretch who is governed only by his instincts may be, marriage is still open to him; or, so far as the condition and character of the next generation are concerned, the same consequences may happen without marriage. This, also, the statesman and the moralist should heed, that however adverse to the welfare of human society may be the circumstances under which a fore-doomed class of children are born, yet the doctrine of the sanctity of human life protects their existence. Public hospitals, private charities, step in and rescue them from the hand of death. Hence they swarm into life by myriads, and crowd upwards into the ranks of society. But in society there are no vacant places to receive them, nor unclaimed bread for their sustenance. Though uninstructed in the arts of industry, though wholly untaught in the restraints and the obligations of duty, still the great pri-

mal law of self-preservation works in their blood as vigorously as in the blood of kings. It urges them on to procure the means of gratification ; but, having no resources in labor or in frugality, they betake themselves to fraud, violence, incendiarism, and the destruction of human life, as naturally as an honest man engages in an honest employment. Such, literally, is the present condition of large portions of the human race in some countries of Europe. In wide, rural districts, in moral jungles, hidden from public view within the recesses of great cities, those who are next to be born, and to come upon the stage of action, will come, *fifty to one*, from the lowest orders of the people, — lowest in intellect and morals, and in the qualities of prudence, foresight, judgment, temperance, — lowest in health and vigor, and in all the elements of a good mental and physical organization, — strong only in the fierce strength of the animal nature, and in the absence of all reason and conscience to restrain its ferocity. Of such stock and lineage must the next generation be. In the mean time, while these calamities are developing and maturing, a few individuals — some of whom have a deep stake in society, others moved by nobler considerations of benevolence and religion — are striving to discover or devise the means for warding off these impending dangers. Some look for relief in a change of administration, and in the change of policy it will insure. With others, compulsory emigration is a remedy, — a remedy by which a portion of the household is to be expelled from the paternal mansion by the terrors of starvation. There are still others who think that the redundant population should be reduced to the existing means of subsistence ; and they hint darkly at pestilence and famine as agents for sweeping away the surplus poor, as famishing sailors upon a wreck hint darkly at the casting of lots. Smaller in numbers than any of the preceding is that class who see and know, that, while the prolific causes of these evils are suffered to exist, all the above schemes, though executed to their fullest extent, can only be palliatives of the pain, and not remedies for the

disease; who see and know how fallacious and nugatory all such measures must be towards the re-creation of national character, towards the laying anew of the social foundations of strength and purity. They see and know that no external appliances can restore soundness to a fabric where the dry-rot of corruption has penetrated to the innermost fibres of its structure. The only remedy, this side of miracles, which presents itself to the clear vision of this class, is in a laborious process of renovation, in a thorough physical, mental, spiritual culture of the rising generation, reaching to its depths, extending to its circumference, sustained by the power and resources of the government, and carried forward irrespective of party and of denomination. But a combination of vested interests has hitherto cut off this resource, and hence they stand, appalled and aghast, like one who finds too late that he is in the path of the descending avalanche. Under circumstances so adverse to the well-being of large portions of the race, the best that even hope dares to whisper is, that, in the course of long periods yet to come, the degraded progeny of a degraded parentage may at length be reclaimed, may be uplifted to the level whence their fearful descent began. But, if this restoration is ever effected, it can only be by such almost superhuman exertions as will overcome the momentum they have acquired in the fall, and by vast expenditures and sacrifices corresponding to the derelictions of former times.

It was from a condition of society like this, or from one where principles and agencies were at work tending to produce a condition of society like this, that our ancestors fled. They came here as to a newly-formed world. In many respects, the colonization of New England was like a new creation of the race. History cannot deny that the founders of that colony had faults. Indeed, the almost incredible fact, that, as soon as they escaped from persecution, they became persecutors themselves; that, while the wounds were still unhealed which the iron fetters of oppression had made in their souls, they began

to forge fetters for the souls of others, — this fact would seem mysterious and inexplicable, did we not see in it so vivid an illustration of the established order of Nature and Providence, signalizing to the world the power of a vicious education over virtuous men ; exemplifying the effect of tyrannical institutions upon human character, by an instance so conspicuous and flagrant that it should be remembered to the end of time, and should forever supersede the necessity of another warning. But, on the other hand, history must concede to the founders of this colony the possession of exalted, far-shining, immortal virtues. Not the least among the blessings which they brought were health and a robustness of constitution that no luxury had ever enervated, or vicious indulgences ever corrupted. In all that company, there was not a drop of blood which had been tainted by vice, nor an act of life that had been stained by crime. Arriving here at a period when winter had converted the land into one broad desert, the inclemency of the season and the extremity of their toils swept away all the less healthful and vigorous, and left not man or woman, save those whose hardy and powerful frames the perils of the ocean, and the wintry rigors of the clime, and the privations of a houseless and provisionless coast, had assailed in vain. In physical energy and hardihood, such were the progenitors of New England. It was said above, that this settlement of our country resembled, in some respects, the creation anew of the race ; but, had Adam and Eve been created under circumstances so adverse to life, we cannot suppose they would have survived the day on which they were animated. Yet these men and women were the first parents, the Adam and Eve, of our republic. Mighty as were their bodies, their spirits were mightier still. Some of the former did yield to privation and peril and disease ; but, in that whole company, not a heart ever relented. Stanch, undaunted, invincible, they held fast to what they believed to be the dictates of conscience and the oracles of God ; and, in the great moral epic which celebrates the story of their trials and their triumphs, the word “ apostate ” is nowhere written.



This transference of the fortunes of our race from the Old to the New World was a gain to humanity of at least a thousand years. I mean, if all the great and good men of Europe, from the 22d of December, 1620, had united their energies to ameliorate the condition of the human family, and had encountered no hostility, either from civil or religious despotism, it would have taken ten centuries to bring the institutions and the population of Europe to a point where the great experiment of improving the condition of the race by means of intellectual, moral, and religious culture, could be as favorably commenced as it was commenced on the day when the Pilgrims first set foot upon the Rock of Plymouth. What mighty obstructions and hinderances to human progress did they leave behind them! what dynasties of powerful men, and the more firmly-seated dynasties of false opinions! But, in the world to which they came, there were no classes upheld by law in feudal privilege and prerogative. There were no laws of hereditary descent upholding one class in opulence and power, irrespective of merit or vigor, and degrading other classes to perpetual indigence and servility, without demerit or imbecility. Here was no cramped territory whose resources were insufficient to furnish a healthful competence to all; nor any crowded population, struggling so earnestly to supply their cravings for daily necessities that all the nobler wants of the soul were silenced by the clamor of the appetites. No predatory barons had conquered the whole land, and monopolized it, and, by a course of legislation as iniquitous as the original robbery itself, had predestined its descent in the line of particular families, through all coming time, so that *not one in hundreds* of all who should be born into the State could own a rood of ground which he might till for subsistence while living, or beneath which he could have a right of burial when dead.\*

Our Pilgrim Fathers also possessed intelligence, — not merely

\* The population of England is 16,000,000. The number of land-holders in fee is estimated by the Radicals at 30,000, and by the Tories at 36,000. A mean of 33,000 would give one land-owner to 484 non land-owners.

common learning and information on common affairs, but most of them were men of accomplished education, conversant with the world's history, profoundly thoughtful, and as well qualified as any equally numerous community that had ever existed to discuss the deepest questions of State or Church, of time or eternity. Hence we are not the descendants of an ignorant horde, or pauper colony, driven out from the parent country in quest of food, and leaving all metropolitan art, intelligence, and refinement behind them. Besides, almost coeval with the settlement of the colony, they founded a college, and established common schools. In the first clearings of the forest, by the side of the first dwellings which they erected for a shelter, they built the schoolhouse; and of the produce of the first crops planted for their precarious subsistence, they apportioned a share for the maintenance of teachers and professors. This they did, that the altar-lights of knowledge and piety which they had here kindled might never go out. This they did, hoping that each generation would feed the flame to illumine the path of its successors, — a flame which should not be suffered to expire, but should shine on forever to enlighten and gladden every soul that should here be called into existence.

I repeat that the transference of the fortunes of the race to the New World, under such auspices, was a gain to humanity of at least a thousand years. By that removal, we were at once placed at a distance of three thousand miles from any spot where the Inquisition had ever tortured, or the fagot of persecution had ever blazed. By that removal, the chains of feudalism were shaken off. The false principle of artificial orders and castes in society was annulled. The monopolies of chartered companies and guilds were abolished. Proscriptions by men, who knew but one thing, of all knowledge they did not themselves possess, no longer bound the free soul in its quest of truth. Rapacious hordes of vicious and impoverished classes no longer prowled through society, plundering its wealth and jeopardizing the life of its members. There were no besotted

races, occupying the vanishing point of humanity, to be reclaimed. A free, unbounded career for the development of the faculties, and the pursuit of knowledge and happiness, was opened for all. Ample and open as was the territory around them, their spiritual domain was more ample and open still. On the earth, there was no arbitrary power to forbid the establishment of righteous and humane institutions and laws; and, as they looked upward, the air was not filled with demon-shapes of superstition and fear, interdicting their access to heaven. Opportunity was given to discard whatever old errors should remain, and to adopt whatever new truths either the course of Nature or the providence of God might reveal. Whatever of degeneracy was to come upon themselves or upon their descendants in later times, was to come, not from hereditary transmission, not from nature or necessity, but from the culpable dereliction or allowance of themselves or their posterity.

Surely never were the circumstances of a nation's birth so propitious to all that is pure in motive, and great in achievement, and redundant in the means of universal happiness. Never before was a land so consecrated to knowledge and virtue. Never were children and children's children so dedicated to God and to humanity as when in those forest-solitudes—that temple of the wide earth and the o'erarching heavens, girt round with the terrors of ocean and wilderness, afar from the pomp of cathedral and court, in the presence only of the conscious spirits of the creatures who made, and of the Creator who accepted their vows—we, their descendants, were devoted to the cause of human freedom, to duty, to justice, to charity to intelligence, to religion, by those holy men.

It is in no boastful or vain-glorious spirit that I refer to this heroic period of our country's history. It is in no invidious mood that I contrast the leading features of our civil polity and our social condition with those of the transatlantic nations of Christendom. Rather must I confess that the contemplation of these historic events brings more humiliation than pride.

It demands of us whether we have retained our vantage-ground of a thousand years. It forces upon the conscience the solemn question, whether we have been faithful to duty. Stewards of a more precious treasure than was ever before committed to mortal hands, are we prepared to exhibit our lives and our history as the record of our stewardship? On the contrary, do we not rather cling to the trust, and vaunt the confidence wherewith we have been honored, without inquiring whether the value of the deposit is not daily diminishing in our hands? Subtract the superiority which, under our more propitious circumstances, we ought to possess, and how much will remain as the aliment of pride? It is not enough for us to say, that we are exempt from the wretchedness of the masses, and from the corruptions of the courts, of other lands. With our institutions and resources, these should have been incommunicable evils, — evils which it would have been alike unmeritorious to avoid and unpardonable to permit. It is no justification for us to adduce the vast, the unexampled increase of our population. The question is not, how many millions we have, but what are their character, conduct, and attributes? We can claim neither reward nor approval for the exuberance of our natural resources, or the magnificence of our civil power. The true inquiry is, in what manner that power has been used: how have those resources been expended? They were convertible into universal elevation and happiness: have they been so converted? Neither a righteous posterity nor a righteous Heaven will adjudicate upon our innocence or guilt on the same principles or according to the same standards as those by which other nations shall be judged. A necessity for defence convicts us of delinquency; for had our deeds corresponded with our privileges, had duty equalled opportunity, we should have stood as a shining mark and exemplar before the world, visible as an inscription written in stars upon the blue arch of the firmament. The question is not, whether we have ruled others, but whether we have ruled ourselves. The accusations which we must answer before the impartial tribunals of earth and heaven are such as these: Have we, by self-denial, by

abstinence from pernicious luxuries, by beneficent labor, by obedience to the physical and organic laws of our nature, retained that measure of health and longevity to which, but for our own acts of disinherison, we had been rightful heirs? Where temptations are few, vice should be so rare as to become monstrous; where Art and Nature lavish wealth, a pauper should be a prodigy: but have we prevented the growth of vice and pauperism amongst us, by seeking out every abandoned child within our borders, as the good shepherd seeks after the lambs lost from his flock, and by training all to habits of industry, frugality, temperance, and an exemplary life? Have we remembered, that, if every citizen has a right to vote when he becomes a man, then the right of every child to that degree of knowledge which shall qualify him to vote is a thousand times as strong? Have the more fortunate classes amongst us, — the men of greater wealth, of superior knowledge, of more commanding influence, — have they periodically arrested their own onward march of improvement, and sounded the trumpet, and sent back guides and succors to *bring up the rear of society*? Have we insulated ourselves, as by a wall of fire, from the corruptions and follies engendered in European courts, and practised only by those who abhor the name of republic? Have we caused the light of our institutions so to shine before the world that the advocates of liberty in all parts of the earth can boldly point to our frame of government as the model of those which are yet to bless mankind? Can we answer these questions as the myriad sufferers under oppression in other lands would have us answer them? If not, then we have not done to others as we would that others, were circumstances reversed, should do unto us.

In the mines of Siberia, at Olmutz, at Spielberg, — in all the dungeons of the Old World where the strong champions of freedom are now pining in captivity beneath the remorseless power of the tyrant, — the morning sun does not send a glimmering ray into their cells, nor does night draw a thicker veil of darkness between them and the world, but the lone prisoner lifts his iron-laden arms to heaven in prayer, that we, the de-

positaries of freedom and of human hopes, may be faithful to our sacred trust; while, on the other hand, the pensioned advocates of despotism stand, with listening ear, to catch the first sound of lawless violence that is wafted from our shores, to note the first breach of faith or act of perfidy amongst us, and to convert them into arguments against liberty and the rights of man. There is not a shout sent up by an insane mob on this side of the Atlantic, but it is echoed by a thousand presses and by ten thousand tongues along every mountain and valley on the other. There is not a conflagration kindled here by the ruthless hand of violence, but its flame glares over all Europe, from horizon to zenith. On each occurrence of a flagitious scene, whether it be an act of turbulence and devastation or a deed of perfidy or breach of faith, monarchs point them out as fruits of the growth, and omens of the fate, of republics, and claim for themselves and their heirs a further extension of the lease of despotism.

The experience of the ages that are past, the hopes of the ages that are yet to come, unite their voices in an appeal to us: they implore us to think more of the character of our people than of its numbers; to look upon our vast natural resources, not as tempters to ostentation and pride, but as means to be converted, by the refining alchemy of education, into mental and spiritual treasures; they supplicate us to seek for whatever complacency or self-satisfaction we are disposed to indulge, not in the extent of our territory or in the products of our soil, but in the expansion and perpetuation of the means of human happiness; they beseech us to exchange the luxuries of sense for the joys of charity, and thus give to the world the example of a nation whose wisdom increases with its prosperity, and whose virtues are equal to its power. For these ends, they enjoin upon us a more earnest, a more universal, a more religious devotion of our exertions and resources to the culture of the youthful mind and heart of the nation. Their gathered voices assert the eternal truth, that, **IN A REPUBLIC, IGNORANCE IS A CRIME; AND THAT PRIVATE IMMORALITY IS NOT LESS AN**

## OPPROBRIUM TO THE STATE THAN IT IS GUILT IN THE PERPETRATOR.

In conclusion, the Board will allow me to express my gratitude for the opportunity they have afforded me of investigating that class of institutions in other countries to whose prosperity in our own I feel so deep an attachment. I need not ask a body of gentlemen from whom I have uniformly experienced such candor and kindness, to distinguish, in this report, between those sentiments and views which I have advanced as my own, and those of other persons, which I have recorded as subjects of interesting or useful information. I am aware that it may be said, that six months are too short a period to authorize any one to visit countries so numerous and so remote, and to speak of institutions so difficult to be understood; but to this it may be answered, that I was not wholly unprepared for the investigation beforehand; and that the time, though short at best, was prolonged by diligence. The better to accomplish my purpose, many of the great thoroughfares, and most of the attractive objects, which the throng of travellers in pursuit of mere personal gratification commonly selects, were left. Always heedful of my mission, I kept my mind in perpetual contact with the great interests of mankind; and after seeing those institutions in other countries out of which human character arises,—as vegetation rises out of the soil,—I have come back to my native State more ardently attached to her institutions than ever before, and animated with a more fervent, an undying desire to see her noble capabilities of usefulness and of happiness developed and cultivated. To be able to return to my post of labor at the appointed time, I have permitted no pain or peril to retard my progress; and, if the observations which I have made and recorded shall produce those impressions of obligation to our country and our kind upon other minds which they have made upon my own, the remembrance alike of the pain and the peril will be sweet.

## REPORT FOR 1844.

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GENTLEMEN, —

THE Annual Abstract of the Massachusetts School Returns was completed and ready for distribution in October last. In 1843, owing to my absence from the country, the Abstract for the year included no selections from the reports of the school committees. On the first day of May last, therefore, I found myself in possession of the school committees' reports for two years. Each set of these documents was more voluminous than for any preceding year. Together, they were equal to fifty-five hundred closely written letter-paper pages. Having, as in former years, read every word of these reports, in order to qualify myself for making selections from them, I have the means of forming an estimate of their value. I do not hesitate to pronounce them as valuable a body of school documents as I have ever seen, in any language. In almost everything that relates to the outward organization of our public schools, to the general principles on which these schools should be administered, the necessity of liberal endowments for their support, and the great purposes of public and private beneficence they are capable of accomplishing, the reports abound in sound principles, heartily and energetically set forth. Throughout their whole compass, however, they exhibit abundant evidence that the prevailing views of what our Common Schools should be, are very far in advance of what they really are. In theory, no quarter is granted to uncomfortable,



unhealthful, repulsive schoolhouses; while, in fact, many such edifices still exist, to deform the beauty of our villages, to alienate children from school and from study, to sow thickly, in the constitutions of the young, the prolific seeds of disease, and to perpetuate what, by an unnatural union of ideas, may be called school vices. On paper, the reports give us the certainty of demonstration, that none but intelligent and exemplary, self-devoted and self-sacrificing individuals should ever be intrusted with the guardianship of children: but in practice, the school committees as deeply lament as they positively affirm, that the momentous interests of the rising generation, and of course, the future hopes and well-being of the republic, are, in numerous instances, committed to individuals, who are too young to have much either of experience or of judgment; whose opportunities have been so few that they cannot have minds replenished with various information, and who, therefore, are unable to dispense those abundant treasures of knowledge, and to exhibit those elevated and inspiring examples of character, which, if existing in the teacher, would be reproduced and multiplied in the pupils under his care. So too, of the suicidal policy of dismembering school districts; so of the variety of school books, with its consequent embarrassment, and obstruction to progress; so of the want of a proper classification of scholars, and of many other constituents in the welfare of our schools; — in all these respects what is, contrasts strongly with what should be. It is well that these high standards should be annually held up, and made conspicuous to the people. The thought of improvement must go before the act. The desire and purpose must precede the pursuit. Neither a man, nor a people, wholly content with the present condition, ever betters it; and in regard to all things dependent upon human exertion, where effort ceases, degeneracy begins.

Both the school committees' reports and the Tables of the Abstract give certain evidence that the people of this State are gradually working upward towards a higher standard, in regard to Common Schools. Since 1837, the appropriations for building and repairing schoolhouses have amounted to between nine hun-

dred thousand and a million of dollars. During the same time, the annual grant made by the towns, for paying the wages and board of teachers, and supplying fuel for the schools, has increased more than one hundred thousand dollars; and while the aggregate paid for tuition in academies, is advancing, the item of expenditure for private schools, has fallen off some \$30,000. He looks at the working of our institutions with a very unpatriotic eye, who sees, in this last fact, nothing but a transfer of so much money from one column to another, in our educational statistics. Were this all, we might, in many instances, rather lament than rejoice, at such a result; because many of the instructors of our private schools are among the worthiest of our citizens and the best of our teachers. Indeed, many of them commenced their profession as teachers of private schools, because the public offered no adequate remuneration for their services, as teachers of Common Schools. But this change in the destination of so large a sum of money, proves that more and more of the children of the Commonwealth are educated in a truly republican manner,—educated together, under the same roof, on the same seats, with the same encouragements, rewards, punishments, and to the exclusion of adventitious and artificial distinctions. Everybody knows that the more early and the more firmly a child's mind is turned towards the fact, that his success, estimation, character, in after-life, are to depend upon his own conduct and exertions, rather than upon accident or favoritism, so much the more likely is that child to become a prosperous and an exemplary man. I see, therefore, in the fact here noted, not merely a diversion of so much money from one destination to another, but the evidence of a peaceable and auspicious change in public sentiment, and a sure omen of good for the rising generation and for the race.

Let me not, however, be understood as censuring those parents, who, *after having conscientiously and perseveringly done everything in their power*, to improve the character of their own schools, and still finding them to be places of intellectual or moral dearth or danger, seek for those benefits in private establishments which are denied them in the public ones.

A much larger proportion of the school committees' reports was printed by the respective towns, for distribution among their inhabitants, during the last two years, than ever before. In 1843, forty-three were printed, — and in 1844, there were forty-four. In this, as in many other particulars, connected with the prosperity of our schools, the county of Essex takes the lead. About half of all the towns in this county print their reports.

The law requires that the annual reports of the school committees shall be either printed, or read in open town meeting. As a means of diffusing information respecting the schools, and of exciting an interest in them, the former mode is incomparably superior to the latter. Amid the promiscuous assemblage and the hurried transactions of an annual town meeting, where, not only a variety of public questions, but a multiplicity of private affairs engrosses the attention, the report of a school committee has no fair chance of being even heard by a great majority of the inhabitants; still less of being duly considered by them. After being read, it is immediately deposited in the archives of the town, so that, if any individual is not punctually present and sedulously attentive, he will never become acquainted with its contents; for not one man in five hundred will ever resort to the office of the town clerk to peruse the document in private. But when printed for distribution, a copy is left with each family. It remains in every household, lying upon the table, soliciting to be read, yet awaiting the leisure of the inmates. In this situation, it attracts the notice of mothers, some of whom are the most efficient benefactors of our public schools. There too, it is read, not only by mothers, but also by elder brothers and sisters, none of whom ever hear it, or see it, when it is only read in town meeting, and then buried among the records of the town. It is also obvious, that when a report is only read in town meeting, that portion of the community who need it most, are least likely to hear it.

Some places, it is true, form an exception to the above remarks. There are towns in the State, where the reading of the school committees' report constitutes one of the most interesting exercises of the meeting. All private business is for the time

suspended. The voters gather round, and sit with listening ears and receptive minds. Instances have occurred where, after the reading of their annual report, the committee have read selections from the report of the Board of Education, or from other educational documents, to enlighten the minds and enkindle the zeal of the people, on the great subject of Common Schools. But these are rare cases. On the other hand, where the towns are populous, and the attendance at town meeting general, and especially where some topic of local or of party interest absorbs and agitates the minds of men, the law, for all beneficial purposes, might about as well provide that the reports of the school committee should be read during the sham-fights, at our annual militia musters.

For reasons too obvious to be mentioned, the character of many of the reports would be improved, were they written with a view to being printed. The desire of approval, within the limits assigned by reason, is a laudable impulse; and the expectation of publicity may prove a stimulus even to the most conscientious men. Highly valuable and excellent as are the school committees' reports, when considered as a whole, yet there are more or less of them, every year, which I think would never have passed from the committees' hands, had their authors anticipated the doom of appearing in print.

In my Fifth Annual Report, I showed that such was the enormous amount of the average absence of scholars wholly dependent upon the Common Schools for an education, that, were a single portion of the territory of the Commonwealth to be selected, and doomed to bear the entire loss, the "absence even in winter, when it was more than eighteen thousand less than in summer, would have exceeded the number of all the children between four and sixteen years of age, in the five western counties of Berkshire, Hampshire, Hampden, Franklin, and Worcester; — that it would have exceeded, by more than ten thousand, all the children, between four and sixteen years of age, in the six south-eastern counties of Norfolk, Bristol, Plymouth, Barnstable, Dukes County, and Nantucket; that it would have been nearly

equal to all the children, between the same ages, in the three great counties of Suffolk, Essex, and Middlesex; and that the amount of absence in the summer, would have exceeded the number of children in the three last named counties, by more than sixteen thousand." The questions which I then put, have since lost but little of their significance, namely: "were all the children in either of those three great sections of the Commonwealth wholly deprived of the privileges of a Common School education, would not the State, foreseeing the inevitable calamities which, in the immutable order of events, must result from rearing so large a portion of its population in ignorance,—be filled with alarm, and impelled by the instinct of self-preservation, to seek for an antidote? But is the evil which this fact infallibly prophesies, any less dangerous or imminent, because, instead of shrouding one particular section of the Commonwealth in night, it is diffused over the entire surface of the State, darkening the common atmosphere, and blinding the vision of the whole people?"

Another aspect, in which this case may be presented, is as little calculated to minister to our contentment or self-complacency. Deducting the number of children below *four* and over *sixteen* years of age, who attend our Common Schools, it then appears that, while the schools themselves are kept less than two thirds of the year, the average attendance of children between four and sixteen is less than two thirds of the whole number between these ages belonging to the State. And this is true even of the winter schools, when the average attendance exceeds by eighteen thousand the average attendance in summer. If one third of the schooling of the children is lost, each year, then, of course, in three years, it is equal to the loss of their whole schooling for one year. Now suppose that every third year, the State should raise its more than half million of dollars, and should provide and pay its complement of teachers, but that no child should attend its schools for a single day; that the schoolhouses, those places which we have been accustomed to look upon as the nurseries of intelligence and virtue, and the defences of our liberty, should be

left desolate from one end of the year to the other. The actual fact is worse than the supposition here made; because a regular and unbroken attendance for two years, during the whole time the schools are kept, with an entire intermission of the third year, would be far more serviceable than the same amount of schooling spread irregularly over three years. Or, to look at the case for one moment, in another of its aspects; suppose, every third year, the whole body of teachers in the State should absent themselves from their respective schools, and still draw their compensation from the public treasury; would the injustice on the one side, or the loss on the other be any greater, in that year, than they now are? For imparting instruction, through the medium of our schools, the presence of the scholar is as essential as the presence of the teacher.

In this extraordinary state of things, we may well inquire, where lies the error? With such a striking contradiction between our own course, and the clear indications of nature, we may ask, whether nature herself has made a mistake, or whether we are not wrong in refusing to comply with her plans? Does the body demand daily and well adapted nourishment for twenty years, in order to reach its full development and strength, while the soul can expand and get wisdom and understanding amidst moral and intellectual drought and barrenness? Is there no such thing as mental destitution and famine, as well as physical starvation? Does the body obey a law of increase which postpones its maturity for a period of twenty years, while the mind can be developed into full proportions, and replenished with all requisite knowledge and judgment and principle, at once? Is there no veracity in those records of human history which declare, in respect to every nation, without an exception, that where the children are uncultivated, the men and women are barbarians? Is it true that where one ignorant and passionate man controls the destinies of an empire, he will assuredly hurl it to destruction; but that a nation, whose destinies are controlled by thousands of ignorant and passionate men, may still look forward to a joyous career of prosperity and renown? Did our ancestors commit so

great an error as to provide a system of schools for all the children in the State, when only a part of those children would have either necessity or occasion for the benefits they confer? Is so limited an education, as our schools are now giving, sufficient for the political wants of a community, all whose voters "sit in kings' houses"? If all these questions cannot be answered in the affirmative, then ought we not to feel alarmed that so many of our children are annually forfeiting the benefits of our schools? — I do not mean the alarm of the simpleton, who is bereft of his senses at the prospect of danger, but the apprehension of the wise man, who, foreseeing calamity, averts it by timely precautions. Among our most patriotic and philanthropic citizens, the inquiry is becoming more and more frequent, whether a right to rear up children in a state of ignorance, with all its consequent degradation and dangers, is one of the inalienable rights of a republican.

In this connection I would suggest, whether the income of the school fund might not be distributed among the towns, according to the attendance upon the schools, and not according to the numbers between four and sixteen years of age. Why should money be given to the towns to be thrown away?

#### EMPLOYMENT OF FEMALE TEACHERS.

One of the most extraordinary changes which have taken place in our schools, during the last seven years, consists in the great proportionate increase in the number of female teachers employed.

In 1837, the number of male teachers in all our public schools, including summer and winter terms, was,	2370
Of females . . . . .	3591
In the school year 1843-4, it was, — males,	2529
Females . . . . .	4581
Increase in the number of male teachers . . . .	159
“ “ “ female “ . . . .	990
During the same time, the number of schools, in the State, has increased only . . . . .	418

This change in public sentiment, in regard to the employment of female teachers, I believe to be in accordance with the dictates of the soundest philosophy. Is not woman destined to conduct the rising generation, of both sexes, at least through all the primary stages of education? Has not the Author of nature pre-adapted her, by constitution, and faculty, and temperament, for this noble work? What station of beneficent labor can she aspire to, more honorable, or more congenial to every pure and generous impulse? In the great system of society, what other part can she act, so intimately connected with the refinement and purification of the race? How otherwise can she so well vindicate her right to an exalted station in the scale of being; and cause that shameful sentence of degradation by which she has so long been dishonored, to be repealed? Four fifths of all the women who have ever lived, have been the slaves of man, — the menials in his household, the drudges in his field, the instruments of his pleasure; or, at best, the gilded toys of his leisure days in court or palace. She has been outlawed from honorable service, and almost incapacitated, by her servile condition, for the highest aspirations after usefulness and renown. But a noble revenge awaits her. By a manifestation of the superiority of moral power, she can triumph over that physical power which has hitherto subjected her to bondage. She can bless those by whom she has been wronged. By refining the tastes and sentiments of man, she can change the objects of his ambition; and, with changed objects of ambition, the fields of honorable exertion can be divided between the sexes. By inspiring nobler desires for nobler objects, she can break down the ascendancy of those selfish motives that have sought their gratification in her submission and inferiority. All this she can do, more rapidly, and more effectually than it can ever be done in any other way, unless through miracles, by training the young to juster notions of honor and duty, and to a higher appreciation of the true dignity and destiny of the race.

The more extensive employment of females for educating the young, will be the addition of a new and mighty power to the



forces of civilization. It is a power, also, which, heretofore, to a very great extent, has been unappropriated; which has been allowed, in the administration of the affairs of men, to run to waste. Hence it will be an addition to one of the grandest spheres of human usefulness, without any subtraction from other departments;—a gain without a loss. For all females,—the great majority,—who are destined, in the course of Providence, to sustain maternal relations, no occupation or apprenticeship can be so serviceable; but, in this connection, it is not unworthy of notice, that, according to the census of Massachusetts, there are almost eight thousand more females than males belonging to the State.

But if a female is to assume the performance of a teacher's duties, she must be endowed with high qualifications. If devoid of mental superiority, then she inevitably falls back into that barbarian relation, where physical strength measures itself against physical strength. In that contest, she can never hope to succeed; or, if she succeeds, it will be only as an Amazon, and not as a personification of moral power. Opportunities, therefore, should be everywhere opened for the fit qualification of female teachers; and all females possessing in an eminent degree, the appropriate natural endowments, should be encouraged to qualify themselves for this sacred work. Those who have worthily improved such opportunities, should be rewarded with social distinction and generous emoluments. Society cannot do less than this, on its own account, for those who are improving its condition; though for the actors themselves, in this beneficent work, the highest rewards must forever remain where God and nature have irrevocably placed them—in the consciousness of well-doing.

Could public opinion, on this one subject, be rectified, and brought into harmony with the great law of Christian duty and love, there are thousands of females amongst us, who now spend lives of frivolity, of unbroken wearisomeness and worthlessness, who would rejoice to exchange their days of painful idleness for such ennobling occupations; and who, in addition to the immedi-

ate rewards of well-doing, would see, in the distant prospect, the consolations of a life well spent, instead of the pangs of remorse for a frivolous and wasted existence.

#### TEACHERS' INSTITUTES.

These are constituted and sustained in the following manner:—

In the spring and autumn of the year, those persons, male and female, who propose to keep school, the ensuing season, assemble at some convenient and central place; and not only form classes for mutual improvement, but they employ some distinguished teacher or teachers, to preside over their meetings, and give them instruction. Here they are indoctrinated, not merely in the general principles of school government, the means and modes of order, discipline, classification, motive powers, etc., but they go through the actual drill of classes and routine of the schoolroom. These teachers elect form themselves into classes, in all the branches they expect to teach; they study lessons and perform recitations, just as is done in a school. The exercises are interspersed with discussions, and the evening is generally occupied by lectures on some topic connected with the great cause of education. The Institutes hold regular sessions from day to day, usually for a fortnight, though for a longer or shorter period, according to the ability and zeal of the parties.

During the autumn which has just closed, a large number of such Institutes were held in the interior and western part of the State of New York. Several of them having made pressing application to a distinguished teacher belonging to the city of Boston to attend and preside at their meetings, he complied with their request, and spent about a month, in different places, amongst them. He reports that their members were animated by a most earnest and praiseworthy spirit; ardent for improvement and grateful for any aid that could increase their fitness for the responsible duties they were about to assume;—that male teachers, who are to receive but ten dollars a month, for their services during the winter, travelled fifty or more miles on foot,

to spend a fortnight of their time in attending these meetings, and that they contented themselves with any fare however meagre, and with any accommodations however rude, — finding their compensation in the mental and literary advantages to be there obtained. This is a noble spirit. It is a spirit which predestines the glory of the State and the welfare of its individual citizens. It is a spirit which, at present, pervades the State of New York more generally, and is acting more efficiently, than in any other State in the Union. I think our own people are not generally aware what and how much have been done for the cause of Common Schools, by the Legislature and people of New York, within the last few years. That State has the most munificent fund devoted to the cause of popular education that exists in the world. It has a far more comprehensive and efficient code of laws for regulating public instruction than any other of the twenty-six states; and its system, with but few exceptions, is most wisely arranged, and is now worked with a vigor and spirit unequalled in any other part of our republic.

Why cannot this plan of Teachers' Institutes, originating in New York, be adopted in Massachusetts? We have borrowed her system of District School Libraries, and it has found almost universal favor amongst our citizens. She has borrowed our system of Normal Schools, — having appropriated at the last session of her Legislature, by a unanimous vote of both houses, the sum of \$50,000 for that purpose; and her Normal School is to be opened at Albany, on the 18th of the present month. Let us now adopt the system of Teachers' Institutes, which she has projected; and thus maintain that noble rivalry of benefactions which is born of a philanthropy that cares more for the good that is done, than it does who are the devisers, the agents, or the recipients of it.

Many Common School Conventions have been held in Massachusetts. These have been very useful in awakening public attention, in exposing defects, and in diffusing a knowledge of principles respecting arrangement, organization, etc. Valuable, however, as these conventions have been, they have not proposed, nor, from their nature, have they been able, to add much to the

qualifications of teachers, as it respects the means and modes of instruction. But Teachers' Institutes propose, not merely the exposition of principles, but an exemplification and embodiment of them, in practice. The sessions of the Institute cover a period many times as long as that occupied by the convention; and the former embraces a range of objects far more ample and comprehensive than the latter. The Institute may effect less, in interesting the citizens at large; but it will accomplish far more in qualifying teachers for their duty.

Besides the American Institute of Instruction, whose services have been recognized by the State, and whose good influences are well known, Teachers' Associations are organized in several of our counties. Some of them hold meetings annually, and one, — the Essex County Teachers' Association, — semi-annually. In no case, however, have their sessions been continued beyond two days, at a time; and, so far as I know, classes for mutual instruction have never been formed, nor has any organization into classes, for drill and recitation, ever been attempted. It is obvious that such an organization would be not only the most effective, but the only way, for bringing out the merits and for exposing the errors, belonging to the every-day detail and routine of the schoolroom.

Were a small *bonus*, — just sufficient to pay an experienced teacher for presiding over and instructing them, and for defraying a few contingent expenses, — to be offered to the teachers, in any county, who would annually assemble for this purpose, — I know not how the same amount of money could be converted into so great an amount of good. For the time being, the Institute would have all the characteristics of a Normal School. The candidates for teaching, coming to its sessions for the express purpose of preparing themselves for immediate duties, would come with receptive and eager minds; and everybody knows how much more living and serviceable is the information which is acquired at the time when it is most needed, and when it supplies the demands of a pressing exigency.

Surely, were such Institutes to be opened here, but few of those

together, for the purpose of enlarging knowledge, and for enkindling the zealous character, also, is the American Institute in New York, for the encouragement of the arts and manufactures in the useful arts. For more than twenty years the State has granted bounties to Agriculture, for the advancement of that fundamental interest of the State; and cannot as much be dependent on agriculture, as on which all the higher interests of the State are so dependent, as for prosecuting researches in the study of abstract science, or for perfecting the mind. It is not as much to be done for improving the mind, as for improving the wealth, as for improving its breeds of cattle.

In several towns in the State, local societies have been formed to enlarge the views and increase the knowledge of the people. In Salem, an organization, embracing all the branches of knowledge, has existed for several years. The managers of the higher schools, have proposed to the State, a more and comprehensive object than their own. Their practical foresight admonishes that the future of their own schools must depend, in a great measure, on the education of the pupils who enter them. Hence they see, that increased qualifications of school teachers, not less than in them-

reservedness so appropriate and graceful in the sex, seldom took part in the deliberations. To obviate this difficulty, the following expedient was devised: The name of each teacher is written on a slip of paper, and deposited in a box. This box is then committed to an individual selected from among themselves, who is called the depositary or drawing-master. The names are so many lots. At each meeting, — and they are held once a fortnight, — the drawing-master takes a name from the box, makes known, privately, to the owner, that the lot has fallen upon him or her, and before the next ensuing meeting, that individual is expected to furnish the drawing-master with a written essay, on some subject connected with the cause of education. This essay is read publicly by him, and the subject of which it treats is then open for general discussion. Thus, wherever there is a will there is a way, for all those who are sincerely desirous of improving the condition of our schools.

As a general fact, there is incontrovertible evidence that the qualifications of teachers are advancing, throughout the State. Still the demand for increased fitness, as made known by the committees' reports, was never more earnest than at present. The existing state of things, in one or two particulars, tends seriously to embarrass committees in the selection of teachers. The number of competitors for employment has greatly increased within a few years. Extended opportunities for education are giving a tolerable knowledge of the rudiments to a much larger number of persons. An aversion to manual employments turns away many from the farm, the workshop, and other industrial occupations; and these, in the more honorable and lucrative rank which school-keeping now holds, are attracted towards this profession as an eligible resource. Another fact bears strongly upon the same point. The average compensation given to teachers is much greater in Massachusetts than in any other State. Hence, in addition to the increased number of applicants springing up amongst ourselves, companies of emigrants from other States are crossing our borders in quest of schools. In some instances, a kind of travelling broker or peddler from another State, comes

amongst us, traversing the country to find vacancies, and hire out unknown schoolmasters. Hence, not only increased difficulty, but increased danger, in making selections, unless the school committees are wary and circumspect, and exercise great judgment in their choice.

In the whole community, there is, doubtless, a sufficient number of individuals whom nature has endowed with the high qualifications necessary to a school teacher. So much of opportunity for preparation, and so much of encouragement in the way of social consideration and emolument, should be proffered to this class, that they will be naturally attracted to a calling so intrinsically honorable. But this can hardly be expected while the condition and sentiments of society open so many other and more direct avenues to eminence and fortune. Hence the places of those whom nature has more especially pre-adapted to this sacred work, are occupied by others,—in some instances, by those whom neither nature nor art has tended to prepare for the service.

#### USE OF THE BIBLE IN SCHOOLS.

Ever since I have been Secretary of the Board, the inquiry has occasionally been made of me,—perhaps oftener, however, by persons residing out of the State than in it,—to what extent the Bible is used in our schools. Having early ascertained that it was very generally used, I stated the fact, at that time, in one of my Reports to the Board. During the past summer, however, the inquiry has been renewed; and it has sometimes been made in such a way as to indicate an apprehension that this book of our fathers was gradually dropping from the hands of their children. Although I knew personally that its use had been extending ever since the existence of the Board, yet, to put the matter beyond question, I took measures to obtain authentic evidence as to the fact, in regard to every town in the Commonwealth. The result is as follows: of the 308 towns in the State, the Bible is prescribed by the committees as one of the reading-books to be used in the schools, in 258. In 38 towns, it is used, but whether as a devotional or as a reading-book, the committees do not say. The

committees of *six* towns have not replied to my letter. In three towns, only, it is found that the Scriptures have not been, — or not been *generally*, — used in the schools. The reason assigned by one committee man, is the following: “The cause of their [the Scriptures] non-admission is, that they are not calculated for a schoolbook. The style and phraseology are too difficult to be read, to constitute them a proper book to put into the hands of youth simply to teach them to read. The design of the volume is of a nature higher and holier. From an experience of eleven years of teaching, in my younger days, from the strictest observation and much reflection, this is my decided opinion.” To show the character of the individuals who sometimes get possession of our schools, I give the answer of another committee man, who says: “Objections have been raised against it [the Testament] by some teachers, on account of many of the verses not ending with a full stop”! The committee of one town gave no reason in regard to the past; but a declaration was made that the subject should be immediately attended to. From the general character of the towns not heard from, I have every reason to suppose that their practice conforms to the general usage of the State. Acknowledging, then, before heaven and earth, and with humility and contrition of spirit, that we fall greatly short of what we should be; yet I believe all attempts will prove unavailing to disparage the religious character of Massachusetts, as compared with the rest of Christendom, or to show that its institutions and its people are not as deeply imbued with the divine spirit of Christianity as those of any other community upon the face of the earth.

#### POWER OF TOWNS TO RAISE MONEY FOR SCHOOLS.

The question, — to what extent our municipal corporations may go, in granting money for the support of schools, — is still debated; and as, in several instances, it has seriously interfered with the appropriation of moneys, which otherwise would have been unhesitatingly granted, it may not be amiss to consider some of the points on which the issue must be adjudicated.



It is admitted, by all parties, that the law requires, (and of course authorizes,) every town, to maintain schools of a certain aggregate length, which are to be kept by teachers having certain prescribed qualifications; and that all towns, without exception, falling below this aggregate in the length of its schools, and this prescribed grade in the qualifications of its teachers, become criminally responsible to the judicial tribunals of the State. But the question remains, whether any town may go beyond the exact requisitions of the law. Here, one party maintains that the minimum amount is also the maximum; — that is, when the law requires a town to maintain schools, for such or such a length of time, it impliedly prohibits the town from maintaining schools for a longer period. The argument restricts the legal *power* to the legal *duty*; so that when the *duty* is performed the *power* is exhausted. It is said that towns have no discretion, as to the amount of their grants; but only as to the mode of expending the limited sum they are authorized to raise.

For instance, the law requires that every town in the Commonwealth, however low its valuation, or few its numbers, shall keep, each year, one school for six months, or two or more schools, for terms of time, that shall together be equivalent to six months. If the number of families or householders in the town amounts to one hundred, then one school shall be kept for twelve months, or two or more schools, for terms that together shall be equivalent to twelve months. As the number of inhabitants increases, the required length or number of the schools, also increases. Now the point maintained is, that when towns have supported schools, for the prescribed period, their authority is exhausted. Being corporate bodies, incapable of originating powers, but deriving whatever powers they possess, from the law, when that is done which the law commands to be done, both the power and the obligation come to an end.

The same view is sometimes taken in regard to the studies or branches, which may be legally taught in our schools. Respecting the lowest grade of schools known to the law, the statute declares that they shall be kept by teachers of competent ability.

and good morals, for the instruction of children in orthography, reading, writing, English grammar, geography, arithmetic, and good behavior. On the same ground as before, it is argued, that these are the only branches which can legally be taught in this grade of schools; — that composition, rhetoric, logic, book-keeping, the elements of natural philosophy, the history of the world, or even that of our own country, etc., are not merely unprovided for, in our common district schools, but that their introduction is impliedly forbidden. According to the same view, the employment of a teacher, of the most high and varied attainments, *provided a greater compensation be given him, on account of his superior competency*, would also be illegal. Such is the argument, on the one side, as far as I have been able to learn and to understand it, on the subject of a town's power to grant money for schools.

On the other side, it is maintained that the length of schools and the range of studies prescribed by the statute, are the minimum but not the maximum; — that while every town is obliged to do so much, no town is prohibited from doing more; — and therefore, that any town may sustain schools for any portion of the year and for any grade of studies, which its own discretion may dictate, subject only to the limitation which binds all bodies politic and corporate, of legislative creation; namely, that their powers shall not be exercised wantonly or fraudulently. By this construction the powers of the towns, though not wholly unlimited and indefinite, still are not specifically fixed and bounded; but they contain a germ of expansion, through whose developments our school system may be enlarged from year to year to meet the increasing wants of the community.

In speaking of the two parties, however, which respectively espouse the opposite sides of this question, I would not be understood to say that there is any comparison between them as to numbers. The above questions have been two or three times started at the Common School conventions; they have been propounded in some half dozen of the school committees' reports; my advice has been occasionally asked by letter; and, in

one instance, the subject has been extensively discussed in the public papers.

But, on the other hand, the almost universal practice of the State, has been on the side of a liberal construction of the law ; and, should it now be found, on an appeal to the highest judicial tribunal, that this construction is erroneous, probably there is not a town in the State, whose taxes for the support of schools have not been granted and levied in violation of law ; and hence have been void for excess.

On a subject so important, if there are data for the formation of a satisfactory opinion, it seems desirable that they should be set forth ; so that the public mind, if that be practicable, should rest securely in its convictions, and the advancement of our schools be disencumbered of these embarrassments. With respect and deference, therefore, to the opinions of those from whom I feel obliged to dissent, I propose to submit a few considerations, tending to show, not only that the genius of our government and the necessities imposed upon us by the nature of all our political and social institutions ; — not only the interest and the honor of the Commonwealth, but also that both the spirit and the letter of our laws, fortified by all contemporaneous exposition, sustain the more liberal construction of the statute, to which I have referred.

The proportion of students in all the incorporated academies in the State, when compared with the whole number of children between the ages of four and sixteen years, belonging to the State, is a little less than one in fifty. There are private schools, under the different appellations of select schools, high schools, etc., where some of the higher branches are also taught. But in towns which maintain no town high school, or school which, in the language of the law, is “ kept for the benefit of all the inhabitants,” nineteen twentieths, at least, of all the children, receive all the school education which they bring into life, at the district school. Only about forty of the three hundred and eight towns in the State, are required by law to keep a school of a higher grade than the Common School ; and, on complying with a con-

dition, to be noticed below, this class of towns can exempt themselves from the obligation to maintain such higher schools. Suppose then, the ability of our system of Common Schools to confer an enlarged and generous education, to be curtailed and shrunk to the mere teaching of the elements, — orthography, reading, writing, English grammar, geography, and arithmetic; — and suppose the schools themselves to be restricted to the period mentioned in the law, — and what a meagre, parsimonious, impoverished education, would nineteen twentieths of the children of the State receive. The aggregate length of the Boston schools, last year, was *one hundred and thirty-one years*; that is, the city had one hundred and thirty-one schools which, with only the customary vacations, were kept through the year. It has a Latin school, an English high school, sixteen grammar schools, and one hundred and thirteen primary schools. According to the narrow construction of the law, which is proposed, its Latin and its English high school must be merged in one; and its sixteen grammar and one hundred and thirteen primary schools, must be reduced to an aggregate of only twenty-four months! But the diminution in the length of the schools which would follow from such a construction of the law, is not more alarming than would be the simultaneous contraction of the range of studies. As was said above, these would be brought down to the elementary branches. Let us glance for a moment at the prospective condition of the State, should a construction of the law prevail, so deeply affecting the education of its children.

The people of Massachusetts, to a greater extent than those of any other State in the Union, are a mechanical people. The inventive genius and practical skill of our citizens, in their applications to the useful arts of life, have given a commonness to comfort, and a wide-spreading expansion to physical enjoyment and well-being, such as are not possessed by any other community of equal numbers, on the face of the globe. We have more than eighty-five thousand persons engaged in manufactures and trades, which number represents a population of at least three hundred thousand, or six fifteenths of all the inhabit-

ants of the Commonwealth. With this wide range of every-day business and occupation, the first principles of natural and of mechanical philosophy have the most intimate connection. Our pecuniary well-being as a people, the individual competence and independence of our citizens, are depending more and more upon our skill and progress in these departments of industrial labor. Shut out all branches of natural philosophy from our schools, exclude those seminal ideas and principles upon which and with which inventive genius afterwards works, — from which talent is constantly evolving new applications of the forces and affinities of nature, and thus ameliorating and advancing the condition of man, — and what an inappreciable amount of actual good would be prevented, to say nothing of positive evils which would be incurred. And, as applicable to this subject, let me say, that we are responsible for the good we prevent, as well as for the evil we commit.

In navigating the ocean, — and therefore, directly or indirectly in foreign commerce, — a proportion of our people is engaged, more than twenty times greater than the average of the other States in the Union. Of course there must be inland trade or commerce, growing out of this foreign traffic, which moves, annually, an enormous amount of capital. But the construction of the law, against which I am contending, would exclude navigation, geometry, book-keeping, all commercial studies, etc., from our schools; and it would send men into the varied departments of domestic and inland trade and of foreign commerce, without any specific preparation for their immediate wants.

The elective franchise is enjoyed so extensively amongst us, that it falls but one degree below universal suffrage. For the fit exercise of this inestimable boon of freemen, is not some knowledge of political philosophy and of the history of our own State and nation, of their origin and their various institutions, a prerequisite? Shall the citizen wait until he is called to legislate, before he begins to study the principles of legislation? Shall not accurate views of the nature of government precede the authority to govern? Yet, banish the study of all history and of political philosophy or the science of government from our schools, as such a construction would do, and how many of the

future sovereigns of our State and of our Union would succeed to the possession of political rights without the knowledge indispensable to their intelligent and judicious exercise.

Astronomy is now taught in many of our Common Schools. This is one of the sublimest fields of human investigation. The mind that grasps its facts and principles receives something of the enlargement and grandeur belonging to the science itself. It is a quickener of devotion. All its problems and its truths not only expand the intellect, but they are effusive of a religious influence. Reduce the range of Common School studies, as is proposed, and this exciter of the intellect, this handmaid of religion, is banished from the schoolroom. Human Physiology, — a knowledge of the laws and conditions of Health and Life, — is now becoming common in the better class of schools throughout the State. The uses, the adaptations, the exquisite contrivances of the human system, are so wonderful, so beautiful, and so attractive, that I have heard it said by an eminent teacher, — who deeply loved the study himself, — that when his class in physiology was reciting, it was impossible to make the rest of the school study, or attend to, anything else. Exclude this, and thousands of our people would continue to practise their fatal quackeries and their idiot charms, for the removal of disease and the prolongation of life.

The mass of our people are exceedingly active-minded and inquisitive. Reading is their pastime to a greater degree than is true of any other people, of equal numbers, to be found in the world. Yet they do not read one fourth part so much as they might read, and as they should read; — not for the purpose of positive improvement only, but for the expulsion of low tastes and degrading vices. Yet, if taught to read merely, if left without any means for cultivating a refined and literary taste, if ignorant of the laws of evidence and the axioms of reasoning; — that is, if unacquainted with the principles of Rhetoric and Logic, — they will be without some of the best antidotes against the degrading and poisonous products of the modern press.

Is Botany anywhere studied in connection with our schools, — this construction of the law would drive in the children from their

healthful exploration of the fields of nature. Is Chemistry anywhere pursued, — a science so intimately connected with agriculture, with many of the mechanical trades, and with not a few of the household arts, — it would arrest the progress of children in this direction, and turn them back from the new world of marvels and of utilities, which chemistry reveals. In fine, in regard to all these subjects, respectively so important to temporal well-being, to the right performance of political duties, to taste, intellect, character, morals, — in regard to all these subjects, if we say, — let the mass of the rising generation get their knowledge where they can, it would be equivalent to saying, in ninety-nine cases in every hundred, that they shall get it nowhere.

But this circumscription of the general intellect, this reduction of the mental stature to a pygmy's dimensions, is only one of a formidable company of evils which would follow the exclusion of all the higher branches of study from our Common Schools; especially if the minimum of time during which the schools are required to be kept is to be the maximum also. Would not the character of the teachers be correspondingly degraded? Who would become teachers, if, in towns containing a dozen or even a score of districts, the aggregate length of the schools were not to exceed twelve or twenty-four months; and this brief period to be divided, as it now is, between summer and winter terms? The number of professional teachers in the public schools of the State would dwindle to a handful. All eminence and skill in teaching would seek the patronage of wealth. Private schools would supplant the public; and the latter would become mere charity or pauper establishments, affording but the scantiest instruction for dwarfed and famished minds.

But again; suppose the mass of our young men to grow up to the period of adult life, without the acquisition of anything but the mere elements or rudiments of knowledge, with no general enlargement of mind, no expansion or opening of the faculties towards those different departments of nature for which they were designed and pre-adapted by their beneficent Creator, and what a vast chasm would at once yawn, between the neglected many and those favored few who had enjoyed the privileges of

academical or collegiate education. At once, literary castes would arise in society, as haughty, as exclusive, as antagonistic, as the Brahminical. The community would be dissociated, gathered into clans, with but a few intermediate links in the social chain to serve as a medium of sympathy between the extremes. Men of active, inquiring, replenished minds, naturally seek their associates among men of active, inquiring, replenished minds. If they go in quest of the ignorant, the stockish, the brutified, it is only through the impulses of that divine missionary spirit which seeks the blessing of giving rather than of receiving good. This class of men, unhappily, is very small. Hence the chasm which our institutions, — not nature, — would have created, would remain unbridged. Intellectual castes would inevitably be followed by castes in privileges, in honor, in property, unless the latter should be destroyed, — as under our political institutions would be probable, if not certain, — by the blind rage and vindictiveness of their social inferiors.

I have referred only to the condition of the mass of young men in our community, if all instruction, excepting in the mere rudiments of an education, were abolished in our Common Schools; and if the length of those schools were to be reckoned by days, or even by weeks instead of months. But what would be the condition of nineteen twentieths of the young women of our land, if all beyond the elements of knowledge were to be forever, to them, a land of darkness? For whom would they be fit companions in life? With what literary and scientific tastes would such mothers imbue their children? What would be the character for intellect, refinement, elevation, of the generations that should succeed them? Of course, I speak of the great proportion, — of large majorities; for, doubtless, there would be individual exceptions. Vigorous, talented, enterprising minds will emancipate themselves from the bondage of hereditary degradation, and win fortune, station, celebrity, by inherent, irrepressible power. But this number would be originally small, and, in every generation, it would grow less and less, unless some other cause should counteract the downward movement of the system; because a per-



manent bias, — a steady tendency in things, will forever cause them to approach nearer and nearer to the destined point; and finally, although it may be after long intervals of time and many circuits of gradual approach, to reach it. A steady attraction, though slight, will prevail over great energy of centrifugal forces, acting intermittingly.

In many of the more enlightened, yet arbitrary governments of Europe, where the great doctrines of human rights are dimly seen in theory, and still more dimly recognized in practice, a distinction prevails in regard to the education of the community at large, which should be sedulously excluded from a republican system. According to this distinction, all the avocations of men naturally arrange themselves under three heads. The first class embraces all those industrial employments where we act with material instruments upon material things, — *with matter upon matter*. This includes all mere manual laborers, — the hewers of wood, the drawers of water, ditchers, delvers, etc. In the second class, are comprised all those who act *by mind* upon matter, — the master-mason or architect, head-machinists, head-miners, foresters, engineers, etc. The third class are those who act *by mind upon mind*, — the orator, the poet, the historian, statesman, etc. Different courses of education are projected to meet the supposed necessities of these different grades. But how incongruous and absurd are these notions among a people, by the theory of whose institutions the chief magistracy of the State or of the nation is open to the poorest boy that is born in the land!\*

\* I subjoin a few extracts from the "North British Review," containing some historical sketches of the town of Paisley, in Scotland. They show with what fearful rapidity a people that neglects the education of its children, will descend in the scale of poverty, degradation, and crime. By the facts stated it appears, that not even the neglected generation itself will pass away, without punishing their social superiors for their dereliction from duty. Retribution descends suddenly upon the wealthy, the educated and the powerful, upon whose remissness, the vices, ignorance and guilt of the less fortunate classes in society, are to be primarily charged.

#### PAISLEY IN 1800 — 1844.

"Paisley is perhaps the most plebeian town of its size in Europe, its population being composed chiefly of weavers, with such accompanying trades and occupations as are dependent upon, or necessary for, the supply of weavers and weaving

These are some of the considerations which serve to show the reasonableness of that construction of the law which has prevailed for generations, and for which I now contend.

#### VOCAL MUSIC IN SCHOOLS.

There are about five hundred schools in the State where vocal music is now practised. Half a dozen years ago, the number was probably less than one hundred.

In speaking of the subject of Vocal Music in our Common Schools, I ought to make an apology for not having introduced it in former reports, rather than ask permission to refer to it now. The length of the reports heretofore submitted to the Board,

apparatus. From its proximity to Glasgow, Paisley can boast of few extensive manufacturers, many of its operatives being employed in Glasgow houses, through the medium of resident agents; and, having few home or foreign merchants of any note, it presents the extraordinary feature of almost an entire working population. As some important practical results, both of a moral and political nature, may be drawn from a review of its past and present history, it is our intention, in the present article, to take a cursory view of the *weavers*, — in other words, the general population of that town, from about the year 1775 or 1780 to the present day, contrasting its moral and intellectual character, at two or three distinct periods, and endeavoring to account for the sad declension in public manners which of late has been so obvious to the country at large.

“To state the simple fact, that the once quiet, sober, moral, and intelligent inhabitants of Paisley, are now generally a turbulent, immoral, and half-educated population, is to state what almost every one knows, what many mourn over, but for which few seem able to propose any remedy.

“It is indeed a melancholy subject for contemplation, that what was at first eagerly embraced by many as an addition to their family receipts, has ultimately proved, not a chief cause of individual poverty only, but of family feuds, insubordination on the part of children, and, as a natural consequence, a general moral degradation over the whole community. We allude to the practice, introduced about the year 1800, (when the manufacture of India imitation shawls was first commenced,) of employing children as draw-boys from the early age of five or six to ten or eleven years, — a period of life, till then, uniformly spent in school, or in youthful amusements; but subsequently, from a rapid increase in this branch, all the available children were employed in the weaving-shop.

“From about 1770 to 1800, the manufacture of silk gauzes and fine lawns flourished in Paisley, as also, during a portion of the period alluded to, that of figured-loom and hand-tamboured muslin. These branches afforded to all classes excellent wages; and, being articles of fancy, room was afforded for a display of taste, as well as enterprise and intelligence, for which the Paisley weavers were justly conspicuous. Sobriety and frugality being their general character, good wages enabled almost every weaver to possess himself of a small capital, which, joined with their general intelligence and industry, enabled and induced many a one to spend days and even weeks together in plodding over a new design, as

has alone deterred me from including this among the topics discussed.

The pre-adaptation of the human mind to seek and to find pleasure in Music, is proved by the universality with which the vocal art has been practised among men. Each nation and each age steps forward as a separate witness, to prove the existence of musical faculties and desires, in the race; and their testimony is so unanimous and cumulative that no tribunal can withstand its force. In cultivating music, therefore, are we not following one of the plainest and most universal indications of nature; or rather of that Being by whose wisdom and benevolence nature was constituted? The Creator has made the human soul susceptible of

sisted frequently by his obliging neighbors, knowing that the first half dozen weavers who succeeded in some new style of work were recompensed tenfold.

"Nearly one half of Paisley, at that period, was built by weavers from savings of their ordinary wages. Every house had its garden, and every weaver, being his own master, could work it when he pleased. Many were excellent florists, many possessed a tolerable library, and all were politicians; so that about the period of the French Revolution, Mr. Pitt expressed more fear of the unrestricted political discussions of the Paisley weavers, than of 10,000 armed men. Had Paisley been then, what Paisley is now, crowded with half-informed radicals and infidels, his fears would have been justified; but truth and honest dealing could fear nothing from a community constituted as Paisley then was; and never, perhaps, in the history of the world, was there a more convincing proof of the folly of being afraid of a universal and thorough education, especially when impregnated with the religion of the Bible, than in the state of Paisley at that period.

"At the period alluded to, every man, woman, and child above eight or nine years of age, could read the Bible; many could write and cast accounts; and not a few of the weavers' sons went through a regular course at the grammar school. To have had a distant relative unable to read, or one sent to prison, would have been felt as equally disgraceful.

"The inhabitants were so universally regular in their attendance upon church, and strict afterwards in keeping in-doors, that it is recollected, at the end of the last century, or commencement of the present, that not a living creature, save two or three privileged blackguards, was ever seen walking the streets after divine service; or if any chanced to appear, an errand for the doctor was supposed to be the probable cause. Family duties were generally attended to; and prayer and praise were not confined to the Sabbath evening; for on week days as well as on Sabbath days, the ears of the bystanders were regaled with songs of praise issuing forth from almost every dwelling; and, in those days, it was no uncommon thing to find the highly respectable weaver a most consistent and truly useful elder of the church.

"At that period, the honest, quiet Whig or Tory weaver might be seen with his wife, at four or five o'clock, sallying forth on an evening walk, in full Sabbath attire; the husband in advance of his wife, carrying the youngest child in his arms, and his wife following, with two, three, or four older children; and, per-



emotions which can find no adequate expression but in song. Amongst all nations, joy has its chorus, and sorrow its dirge. Patriotism exults over national triumphs, in national songs; and religion yearns, and vainly strives to pour out its full tide of thanksgivings to its Maker, until the anthem and the hallelujah take the rapt spirit upon their wings and bear it to the throne of God.

Nature not only points, as with her finger, towards the universal culture of the musical art, but she has bestowed upon all men the means of cultivating it. The voice and the ear are universal endowments;—or at most, the exceptions are few, and

chance, ere their return, a brother and sister-in-law were honored with a visit to a cup of tea, to which they experienced a hearty welcome. Nor were little luxuries on such occasions altogether unknown, a weaver then being able to afford them.

“Although early marriages were very common, yet the frequently attendant evils were not immediately felt; a lad of eighteen or twenty being quite as able to support a family as his father at forty; and he did not anticipate those days of darkness and privation which have since come on Paisley.

“We have come now to the mournful cause of the present degraded state of that once moral and happy town; not that we imagine that the fluctuations of trade, arising from the change from a war to a peace system, have not affected that town in common with others; but these fluctuations would have passed over it with comparatively little injury but for the operative cause we are about to mention, which wrought its sure though silent influence upon the manners, habits and morals of the general population.

“The introduction of the manufactory of imitation India shawls, about the year 1800, required that each weaver should employ one, two, or three boys, called draw-boys. Eleven to twelve was the usual age, previous to this period, for sending boys to the loom; but as boys of any age above five were equal to this work of drawing, those of ten years were first employed, then, as the demand increased, those of nine, eight, seven, six, and even five. Girls, too, were by and by introduced into the same employment, and at equally tender years. Many a struggle the honest and intelligent weaver must have had, between his duty to his children and his immediate interests. The idea of his children growing up without schooling must have cost him many a pang, but the idea of losing 2s. 6d., or 3s., or 3s. 3d. per week, and paying school wages besides, proved too great a bribe, even for parental affection; and as might have been expected, *mammon* in the end prevailed, and the practice gradually became too common and familiar to excite more than a passing regret. Children grew up without either the education or the training which the youth of the country derive from the schoolmaster; and every year, since 1805, has sent forth its hundreds of unschooled and untrained boys and girls, now become the parents of a still ruder, more undisciplined and ignorant offspring. Nor was this all. So great was the demand for draw-boys, that ever and anon the town-crier went through the streets, offering not simply 2s. 6d., 3s., or 3s. 3d. a week for the labor of boys and girls, but bed, board, and washing

there is abundant reason to believe that these exceptions are not inherent in the nature of things, but only punishments for our infraction of the Physical Laws; and that the number of exceptions may be gradually reduced, until the calamity of privation shall be wholly removed; — and removed too, not by any repeal of the laws that inflict it, but only by obedience to their requirements. Substantially, then, the voice and the ear are universal endowments of nature, and thus the means of enjoying the delights and of profiting by the utilities of music, are conferred upon all.

Of what other, among that beautiful sisterhood, called the Fine

and a penny to themselves on Saturday night. This was a reward on disobedience to parents. Family insubordination, with all its trains of evils, followed. The son, instead of standing in awe of his father, began to think himself a man, when he was only a brawling, impudent boy. On the first or second quarrel with his father, he felt he might abandon the parental roof, for the less irksome employment of the stranger. The first principle of all subordination was thus broken up, and the boy who refused to hearken to the voice of his father or his mother, and to honor them, could not be expected, when he became a man, to fear God, or to honor the king. If ignorance be the mother of superstitious devotion, it is also the mother of stupid and vulgar contempt. An intelligent and moral people will ever be most ready to give honor where it is due; and, respecting themselves, they will yield a willing respect to intelligence, virtue, rank, and lawful authority, wherever it is placed.

"This increase of the family receipts, arising from the employment of one or more children as draw-boys, ceased on the first slackness in the demand; for it is evident that the additional sum, we shall suppose of 5s. a week, drawn by the labor of the weaver's children, enabled him to work just at so much lower prices to any manufacturer who might choose to speculate in making goods at the reduced price, in the hope of a future demand. A short period of idleness on the part of the weaver would have given him time for the overstock of goods to clear off, whereas this practice of working even extra hours during the period of a glut, tended to perpetuate the glut, or to render fluctuations arising from this source more frequent; and, along with other causes, to perpetuate low wages. Thus was the employment of their children from five to ten, by the weavers of Paisley, at first an apparent advantage, but in the end, a curse; demonstrating that whatever may be the interests of parents this year or next year, it is permanently the interest of them and their offspring to refuse every advantage in their temporal concerns, which tends to deprive youth of the first of parental blessings, education; and that Providence has bound, in indissoluble alliance, the intelligence, the virtue, and the temporal well-being of society. In 1818-19, during the radical period, there were found full three thousand, Paisley-born and Paisley-bred, who could not read; and the decline of intelligence has been followed by the decline of that temperance, prudence and economy, which are the cardinal virtues of the working classes, by which alone they can elevate their condition, or preserve themselves from sinking into the most abject poverty."

or the Elegant Arts, can this be said? Doubtless there is an instinct pointing to architecture, painting, sculpture, etc., as well as an instinct of music. Men might have reared arches, columns, and temples, as embodiments of their emotions of grandeur and sublimity, had no necessity for shelter ever prompted the erection of a human habitation. So painting and sculpture might have arisen to commemorate the lineaments or the deeds of the departed great and good, or to solace or to inspire their bereaved survivors. But how costly, for instance, are architectural gratifications. What years of labor, what expenditure of means, must precede the enjoyments they confer. In any previous age, and even in the present, how small is the portion of the human family to which the sight of a splendid edifice is accessible. But the pleasure resulting from the use of the human voice in song, is the common patrimony of mankind. The inmate of the lowliest dwelling as well as the master of the lordliest castle may enjoy them. He whose hard lot deprives him not only of the embellishments but even of the common comforts of life, may regale himself with the unpurchased "wealth of song." The pleasures of music attend their possessor not only in the hours of prosperity, but in those of sorrow. Music may be a companion in the lone vigils of pain, or in the deeper solitude of bereavement. It may support and console, when no other of the benignant family of the Arts could give balm or anodyne to the wounded spirit.

In one respect, Vocal Music holds signal pre-eminence over Instrumental. The latter is too expensive a luxury to be within the reach of a great portion of mankind. But the instruments of vocal music levy no contributions upon another's skill, or our own money. They are the gratuity of nature, and in this respect, the common mother has rarely been unmindful of any of her children. Of the implements or contrivances by which many pleasures are produced, it is the vaunted recommendation, that they can be compacted in a small space and carried about by the traveller, on his person, or in his equipage, without cumbersomeness. But, in this respect, we can say of this simple yet most exquisite mechanism, — the organs of the human voice, — what can be

said of no contrivance or workmanship, prepared by human skill and designed for human enjoyment. No one can carry about his person or transport from place to place, a column, a statue, or a painting, however beautiful, or however essential to his enjoyment, it may be; but the apparatus for singing is the unconscious companion of all, and we can often use it without hinderance when engaged in active occupations. Present at all times, unburdensome, a means of gratuitous solace, an inexpensive luxury, — what other of the refining arts offers inducements for cultivation so universal, or rewards that cultivation with bounties so generous and manifold?

Nature has drawn broadly the lines of another great distinction, which redounds with equal force, in favor of the vocal art. I refer to an organic difference, established in our spiritual constitution, between the gratifications of the intellect, and the pleasures of taste or sentiment. The intellectual powers are progressive in their nature. For stimulus they demand novelty. If fresh exertions are not rewarded by fresh truths, all exertion will soon cease. The mental athlete can no longer find pleasure in tossing the playthings of feathery lightness, that amused his childhood. He demands a solidity that will cohere in his grasp and a might that will match his strength. The philosopher cannot return to toys and bubbles. All his delight in the former phases of things dies out by familiarity, and he presses onward to the discovery of new truths. The ratiocinative mind, so long accustomed to logical processes that it has acquired an almost intuitive power of discerning remote conclusions on an inspection of premises, can no longer tread in those infantile steps by which the consecutive stages in an argument or demonstration were once passed over. From the statement of the problem, it springs to the solution, — disdaining the tedious lingering, not less than the awkward movements, by which its laborious way from premises to conclusion, was once achieved. It is almost as impossible for a practised mind to imitate the slowness of childhood in its thoughts, as it would have been, in childhood, to equal the rapidity obtained by practice. But how different in all these

respects, are the pleasures of sentiment. The earliest and simplest melodies or songs are capable of affording an ever-renewing delight. Though rehearsed a thousand times, they yield fresh enjoyment at every repetition. Even to the mature mind, they have lost none of the charms which invested them in its youth; and they are as congenial to the thoughtfulness of age as to the thoughtlessness of childhood. Their peculiar attribute is not to grow old; not to weary the oft-listening sense, not to pall upon the oft-attentive mind.\* Hence the admirable, the unequalled power of song to furnish pleasure or relief when other mental gratifications cannot be commanded; and even when others cannot be endured. When the energies of the intellect have been expended by severe application, or its elasticity has been destroyed by a weight of cares, or its vigor broken down by sickness;—when, from any cause, these onward-tending faculties can no longer find or create their natural diversions, it is then, that the simple and calm delights of music restore the energies that have been wasted by toil, revivify the spirits languishing with care, or cause the dawn of joy to arise upon the long watches of sickness. There is not a condition of prosperity or of adversity, in human life, to which something cannot be found, in the wide compass of music, at once responsive and grateful. There is not a capacity in the nature of man so pure or lofty, that music is uncongenial to its exercise, nor a susceptibility so tender and delicate, as not to welcome its companionship. Its capacities enfold our capacities, as the atmosphere encompasses the globe.

There is still another attribute or quality of music too important to be unnoticed in developing its relations to mankind. It does not require any degree of perfection as a science, in order to become pleasing as an art. Doubtless in this, as in all other things, those who understand the subject best will enjoy it most; but still, proficiency is not indispensable to pleasure; and those who possess the art at all, realize an enjoyment fully propor-

\* "Would one think," says J. J. Rousseau, "that an old dotard like myself, worn out with cares and troubles, should find myself weeping like an infant while I murmur, with a broken and trembling voice, the songs of my childhood?"



tioned to the degree of art they possess. It is not so in regard to many, and perhaps, most other human attainments; for a high degree of excellence in them must be reached before their rewards can be received. In music, however, a reward is bestowed corresponding with the degree of advancement gained, however limited that advancement may be. The ear of a musical amateur is pained at the rude carol of a rustic, but why should that rustic troll his song with such unwearying perseverance, if it were not joyous and exhilarating to himself? When the connoisseur pours out his condemnation or ridicule upon the unartistic specimens of the cottage, he is selfishly thinking of his own pleasure, instead of benevolently sympathizing with that of others. Were his heart as well cultivated as his ear, he would think with gratitude upon their resources of pleasure, instead of looking with disdain upon their want of skill. Probably their imperfect skill comes much nearer to a requital than his does, for the cost and the pains expended in acquiring it. This characteristic of the musical art, — to bestow at least a proportionate gratification, from the rudest beginnings to the highest excellence, is another of the bounties offered by nature upon its universal diffusion.

But we are not left to speculation and inference as to the beneficial effects of vocal music in public schools. The universal practice of music in most of the schools of the German states, for a long series of years, is an experiment sufficient of itself to settle the question of its utility. Probably it is not the least efficient among the means by which the schools of Prussia are kept in such admirable order, with so rare a resort to corporal punishment. In that kingdom no person could be approved as a teacher, — no individual, indeed, would ever think of presenting himself as a candidate for teaching, even in the obscurest school and at the lowest salary, — who was not master both of the theory and practice of vocal music, and also a performer upon one or more instruments. Aided by these influences, which conspire of course with others springing from the mildness and amiability of the teachers' character, and from their strong love

of children, their high sense of duty, and emphatically, from their richly replenished and well disciplined minds, the Prussian teachers rarely have occasion for resorting to coercive measures; and thus the Prussian schoolroom becomes the abode of peace and love, — a bright spot where the sun of affection is rarely obscured even by a passing cloud. That whole country, indeed, is vocal with music. It adds zest to all social amusements. It saves the people from boisterous and riotous passions. Pervading all classes, it softens and refines the national character. It is the recreation of the student after his severe mental exertion, and it cheers on the laborer sweating at his toil. In some of the southern parts of Germany, where the shepherd's life still continues, and where, as in scriptural and patriarchal times, the shepherd *leads* forth — he does not *drive* but *leads* — his flock, the bells worn by the sheep are tuned to the common chord, so as never to make a dissonant sound; and as the flock are moving along the roads, or more quietly grazing in their pastures, there arises from the earth, as it were, an exhalation of music, which floats far and wide over the land, until at last it dies away in the distance, though not without leaving a genial and tranquillizing influence upon the soul.

But we have evidence nearer home of the beneficial effects of music in schools. Six years ago, by a vote of the Boston school committee, provision was made, for giving, at the public expense, stated and regular instruction in vocal music, in all the Grammar and Writing schools of the city. The practice has continued without interruption to the present time. At the period of its introduction, great doubts were entertained by many intelligent people, as to the expediency of the measure. Some of the teachers themselves were alarmed, lest consequences unfavorable to the schools should follow in its train. But, after a trial of several years, the opinion of the same gentlemen was asked respecting its practical results; and, I believe with an entire unanimity, they awarded a favorable decision. Those who, in the beginning, had entertained distrust and apprehension respecting the adoption of the measure, with a creditable

frankness, avowed themselves satisfied, and declared in its favor. From what I know of public opinion among the friends of education, in Boston, I do not believe it would now be possible to revoke the order by which music was introduced into its schools. Provision for instruction in the art of vocal music, in the above named schools, may therefore be regarded as a part of the generous policy of the city towards them, for an indefinite future period.

As a part of the general evidence bearing upon this subject, I may add, that, for half a dozen years past, I have made diligent inquiry of persons residing in various parts of the State, both as to the extent and the effect of vocal music in our schools; and from these sources of information, together with the accounts given by the school committees in their reports, I learn, that, wherever music has been introduced, it has commended itself both to the good sense and the good-will of all parties concerned; and in no instance whatever, that has come to my knowledge, has it been discontinued, in consequence of being disapproved. Such too, so far as I have been able to ascertain, has been the result in other States, wherever a trial has been made.\* A decision so unanimous, from persons so well qualified to judge, seems to change the character of the question, from one of theory and speculation, to one of demonstrated fact.

But to be more specific in presenting the claims of this subject to the attention of our community, I may say,

1st, That Vocal Music promotes health. It accomplishes this object *directly*, by the exercise which it gives to the lungs and other vital organs; and *indirectly*, by the cheerfulness and genial flow of spirits, which it is the especial prerogative of music to bestow. Vocal music cannot be performed without an increased action of the lungs; and an increased action of the lungs necessarily causes an increased action of the heart and of all the organs

\* The following is from the Second Annual Report of the Second Municipality of the City of New Orleans:—

“A teacher of music is also employed, who devotes at least half an hour, three times a week, to each school, and thoroughly instructs the scholars in the rudiments, and exercises them in vocal music. The experience of another year fully sustains the previous estimate of its advantages.”

It would be easy to fill pages with similar testimonials.



of digestion and nutrition. The singer brings a greater quantity of air in contact with the blood. Hence the blood is better purified and vitalized. Good blood gives more active and vigorous play to all the organs of absorption, assimilation and excretion. The better these functions are performed, the purer and more ethereal will be the influences which ascend to the brain. The latter is an organ so exquisitely wrought, that its finest productions are dependent upon the healthfulness of the vital processes below. A fit of indigestion annihilates a statesman's power, though a nation perishes for want of his counsels: and a fever disarms a warrior, before whom legions have trembled. But, on the other hand, energy and electric celerity of movement are generated in a well-formed brain, when it is supplied with healthful and highly oxygenated blood. Spontaneous effusions of serenity, of cheerfulness, and of strength, are the natural results of wisely-managed physical organs; and these qualities serve to invigorate the health that produced them. Thus, by the action and reaction of the material and spiritual natures upon each other, a joyous and tuneful elasticity is dispensed to every part of the complex system of man. The scientific physiologist can trace the effects of singing, from the lungs into the blood; from the blood into the processes of nutrition, and back again into the blood, and into the nerves; and finally from the whole vital tissue into the brain, to be there developed into the flower and fruit of cheerfulness, increased health, increased strength, and a prolonged life, just as easily and as certainly as a skilful manufacturer can trace a parcel of raw material which he puts into his machinery, through the successive stages of being broken down, cleansed, softened, changed into new forms, and made to evolve new qualities, until it comes out at last, a finished and perfect product. In both cases, there may be various conspiring or disturbing forces, tending to aid or to defeat the result, but still, from beginning to end, the connection between cause and effect is as distinctly traceable, as is a broad white line running across a black surface.

In our climate the victims of consumption are a host. It is a formidable disease to males, and still more to females. About twenty per cent of all the deaths that occur, are caused by

consumption; and this estimate includes infancy and childhood, as well as adult age. Restricting the computation to adult life, probably one half or nearly one half of all the deaths that occur, are caused by this terrible disease alone. Vocal music, by exercising and strengthening the lungs, and by imparting gayety to the spirits, would tend to diminish the number of that sad procession whom we daily see hastening to an early tomb.

2d, Vocal Music furnishes the means of intellectual exercises. All musical tones have mathematical relations. Sounds swelling from the faintest to the loudest, or subsiding from the loudest until "there is no space 'twixt them and silence," are all capable of being mathematically expressed. The formulas, 2, 4, 8, 16, 32, 64, 128, etc.; or 128, 64, 32, 16, 8, 4, 2, are no more significant, to the mathematician, of certain fixed, natural, unalterable relations between numbers, than the tones of musical chords are to the scientific musician. Hence the intellect can be exercised on the relations of tones, as well as on the numbers, quantities, or magnitudes of arithmetic, algebra, or geometry; and while music furnishes problems sufficient to task the profoundest mathematical genius that has ever existed, it also exhibits scientific relations so simple as to be within the schoolboy's comprehension. Music, therefore, has this remarkable property;—that it can address itself, with equal facility, either to the intellect or to the emotions, — to the head or to the heart, — tasking all the energies of the former, or gratefully responding to all the sentiments of the latter.

3d, But the social and moral influences of music far transcend, in value, all its physical or intellectual utilities. It holds a natural relationship or affinity with peace, hope, affection, generosity, charity, devotion. There is also a natural repugnance between music and fear, envy, malevolence, misanthropy. In ancient mythology, Nemesis and the Furies never sung. Dr. Potter has a just criticism on Milton, because in his *Paradise Lost*, he represents Satan and his host as moving,

"In perfect phalanx to the Dorian mood  
Of flutes and soft recorders," —  
—— "to soft pipes that charm'd  
Their painful steps," etc.

The Germans have a proverb to the effect that, in the house where music comes not, the devil enters. "At Berlin," says Professor Stowe, "I visited an establishment for the reformation of youthful offenders. Here boys are placed, who have committed offences that bring them under the supervision of the police, to be instructed and rescued from vice, instead of being hardened in iniquity by living in the common prison with old offenders. It is under the care of Dr. Kopf, a most simple-hearted, excellent old gentleman; just such a one as reminds us of the ancient Christians, who lived in the times of the persecution, simplicity and purity of the Christian church. He has been very successful in reclaiming the young offender; and many a one who would otherwise have been forever lost, has, by the influence of this institution, been saved to himself, to his country, and to God. As I was passing with Dr. K. from room to room, I heard some beautiful voices singing in an adjoining apartment, and on entering, I found about twenty of the boys sitting at a long table, making clothes for the establishment, and singing at their work. The doctor enjoyed my surprise, and, on going out, remarked, 'I always keep these little rogues singing at their work; for while the children sing, the devil cannot come among them at all; he can only sit outdoors there and growl; but if they stop singing, in the devil comes.'"

In my last Report, I gave some striking illustrations of the power of music.

Dr. Chalmers observes, "It says much for the nature and original predominance of virtue,—it may be deemed another assertion of its designed pre-eminence in the world, that our best and highest music is that which is charged with loftiest principle, whether it breathes in orisons of sacredness, or is employed to kindle the purposes and to animate the struggles of resolute patriotism; and that, never does it fall with more delightful cadence upon the ear of the delighted listener, than when, attuned to the home sympathies of nature, it tells, in accents of love and pity, of its woes, and its wishes for all humanity. The power and expressiveness of music may well

be regarded as a most beautiful adaptation of external nature to the moral constitution of man, for what can be more adapted to his moral constitution than that which is so helpful as music eminently is, to his moral culture? Its sweetest sounds are those of kind affection. Its sublimest sounds are those most expressive of moral heroism; or most fitted to solemnize the devotion of the heart, and prompt the aspirations and the resolves of exalted piety."

As poor an authority as Napoleon was, on all ethical subjects, — unless taken by the rule of contraries, when he would be nearly perfect, — yet few men knew better than he did, how to appeal to human passions, or how to play off one passion against another. He has recorded his testimony respecting the efficacy of music over national predilections, even when fortified by long-descended traditions. In the history of his Egyptian conquest, it is related that, after he had subdued the organized, physical force of the nation, he sought to perpetuate his power, by a mastery over their sentiments and affections. For this purpose, he wrote home to the Academy in Paris, to inquire what kind of music it would be expedient to employ in the mosques, and in the religious services of the country. His object was to mollify and subdue the hearts of the people, to make them yielding and receptive to the new influences which he wished to exert upon them, and to gain that conquest over their feelings by his arts, which he had achieved over their power by his arms.

Among the ancients, a power of working miracles was attributed to music; and, what is more remarkable still, no sceptic was found to deny it. Diseases were cured by song; a victory was won, not by the addition of numbers or of arms, but by firing the soldiery to greater efforts by higher martial strains; and even the steadfast rocks and trees were fabled to have sprung from their immobility and joined in the harmonious dance. These fables shadow forth a great truth. If men had not felt that music could exercise an almost irresistible sway over their feelings and purposes, they would never have ascribed to it a supernatural agency, nor referred its invention to the gods.

One of the most delightful attributes or characteristics of music is, its harmonizing, pacificating tendency. It may be employed as a grand mediator or peacemaker between men. Harmony of sound produces harmony of feeling. Can it have escaped the observation of any reflecting man, when present at a crowded concert, or at any numerous attended musical festival, what a heterogeneous mass of human beings was before him? Competitors in business; rivals, almost sanguinary, in politics; champions of hostile creeds; leaders of conflicting schools in art or philosophy; — in fine, a collection and full assortment of contrarieties, and antagonisms; — and yet the whole company is fused into *one* by the breath of song! For the time being, at least, enemies are at peace; rivals forget their contests; partisans lay aside their weapons; and the bosoms that harbored acrimonious or vindictive feelings over which time seemed to have no power, are softened into kindness. All respond alike, all applaud in the same place; and men whose thoughts and feelings, an hour before, were as far asunder as the poles, or as the east is from the west, are brought as near together in feeling as they are in space. Who will deny homage to an art that can make men brethren, even for an hour?

If music has such power over men, is it not evident that it will have still greater power over children? I have heard of a family whose custom it was, on the expression or manifestation of ill-nature or untowardness by any one of the members, for all the rest to join instantly in a song; and thus the evil spirit was exorcised at once. Neither child nor man can be long angry *alone*. All but madmen will yield their passions, if they receive no sympathy from others while expressing them, or, if they are not kept alive by an answering passion in an opponent. How extensively may this principle be applied in the management and discipline of children in school; and surely music is one of the best instrumentalities for so benign a purpose.

But, grant the expediency of introducing vocal music into our Common Schools, and the question arises, what measures can be adopted to accomplish that end? Unhappily, there are but few



persons in our community competent to teach the art even of vocal music. We are an un-musical, — not to say, an anti-musical people. No hereditary taste for the art has descended to us. Our Pilgrim Fathers were too stern a race, and their souls were occupied by interests too mighty and all-absorbing, to afford them either leisure or inclination to cultivate music as a refinement or an embellishment of life. Hence, throughout New England, since the first settlement of the colonies, a high degree of musical skill has been a rare accomplishment; and, with the exception of church music, the mass of the population have been strangers, if not worse than strangers, to the art. It is related, in the story of Lord Anson's voyage round the world, that he found, on one of the islands of the Pacific Ocean, the descendants of some dogs, whose ancestors had been left there by a previous circumnavigator. There was no game on the island, and the dogs, having no occasion for the use of their voice, had lost the power of barking. It is by the same cause, — long disuse, — that our people have lost the power of singing. Doubtless if those dumb dogs or their offspring had been placed in the midst of abundant game, their propensities for prey would have been excited anew, and their power of barking restored. By the use of means as appropriate for us, our lost taste for music, as well as the power of performance, may be recovered. What are some of those means?

In our large cities and towns, it is obvious, that there is sufficient pecuniary ability to employ a teacher of music expressly for the schools. It would be better were all our teachers competent, — as some of them are, — to give instruction in this art. One of the finest resources for the infusion of good feeling and for the expulsion of bad, would then be at the command of the teacher, at all times; and he might invoke its aid on any and every emergency. It is the common testimony of teachers, that occasionally there are days, when the cordiality and kindness that should characterize all schools, seem to have departed; when the nerves of the pupils appear to be on the surface, and all movements wound them. On such occasions, the tranquil-

lizing influences of song are gratefully remedial. Its timely service is worth more to the school than the singing of an entire day, when a more auspicious spirit prevails. In most cases, with competent teachers, music would nearly or quite supersede the necessity of coercion, and thus work a vast economy of blows and tears. But where music has been taught to the pupils by a master of the art, the teacher, though not an adept himself, can superintend the exercises, and thus make it an auxiliary in the government of his school.

But a great majority of towns in the Commonwealth will feel themselves unable to employ one teacher for instruction in the common branches, and another teacher for music. To meet a portion of these cases, it may be said that many persons are now acquiring the art as a part of their preparation for becoming teachers. Vocal music is regularly taught at each of the Normal schools; and most of the pupils who go out from these institutions, will not fail to spread a knowledge of the art among their pupils. There is another resource. It sometimes happens, when the teacher is unable to lead, in a musical exercise, that some one of the older scholars in his school is able to do so. In such a case, there would be no objection to his availing himself of the skill of his pupil. A truly dignified teacher would not at all impair his dignity by showing respect for attainments superior to his own. The employment of a pupil, for such a purpose, would be little more than a temporary adoption, for a particular object, of one of the practices of a monitorial school.

But suppose teacher and pupil to be alike incompetent to give lessons, the cases will not be infrequent, where some gentleman or lady, belonging to the school district, will be sufficiently conversant with the art, to give instruction in it. In such a case, it would be a most benevolent and kindly office, if such a person would stately or occasionally visit the school, and impart the knowledge unattainable from any other source. A concert of action throughout the Commonwealth, in these and other ways, for introducing vocal music into our schools, would, in a very few years, so extensively diffuse a knowledge of the art, that

scarcely a school would be found, having no access to a music-master, either in itself, or in its neighborhood; and thus a great desideratum, not only in our schools but in our community, would be supplied.

A question is sometimes asked, whether, if music cannot be taught scientifically, in our schools, it would be expedient to have it taught by rote. The answer to this question is found in the fact, that most if not all the social and moral effects of music will be realized, when it is practised as an art, as fully as though it were studied as a science. Its adaptation to the intellect depends on its scientific relations; its adaptation to the universal heart of mankind depends on its power to soothe, to tranquillize, or to enliven; to express the highest and most rapturous joys which ever thrill the human soul, or to pour a delicious oblivion over the wounded spirit.

In proportion to the extent to which vocal music is introduced into our schools, there will be, of course, a demand for songs and song-books. If the subject of school-books is important, the subject of song-books can hardly be less so. The literary character and moral sentiment of the poetry which children learn, will have an abiding effect upon them through life;—or rather, it would be more correct to say, they will constitute a part of their moral nature, during their existence. While all poetry for children, therefore, should be intelligible and comprehensible by them, it should be select in diction, beautiful and graceful in style, and harmonious in versification. It should be such in all points, as, in after-life, will never offend a mature and cultivated taste. In sentiment, it should inculcate all kindly and social feelings; the love of external nature; regard and sympathy for domestic animals; consideration and benevolence towards every sentient thing, whether it flies, or creeps, or swims; all filial, all brotherly and sisterly affections; respect for age; compassion for the sick, the ignorant, the destitute, and for those who suffer under a privation of the senses or of reason; the love of country, and that philanthropy which looks beyond country, and holds all contemporaries and all posterity in its wide embrace; a passion

for duty, and a homage for all men who do it; and emphatically should it present such religious views as will lead children to fulfil the first great commandment, — “to love the Lord their God with all their heart, and with all their soul, and with all their mind.”

I close this Report with one reflection. (The discordance between the life and history of man, on the one hand, as contrasted with the perfection of the universe in which he is placed, on the other, has been a theme for the lamentation of all moralists and sages, in all periods of the world; and it has infused pathos and elegiac mournfulness into the divinest strains of poetry and prophecy. Looking towards any portion of the great panorama of the universe, — whether it be in the heavens above or in the earth beneath, we behold, everywhere, effulgent proofs of Divine perfection. All is harmonious and complete; all perfect in design, and perfect in execution. All around us, conspicuous as angels clothed in shining raiment, stand the witnesses of Almighty goodness and love; and they cease not, day nor night, to declare the perfections of the Creator. The firmament, with its revolving planets and steadfast constellations, is so beaming with glory even to the untaught eye, that one of the most contemplative and pious of our poets has said of it,

“So bright, with such a wealth of glory stored,  
’Twere sin in heathen not to have adored.”

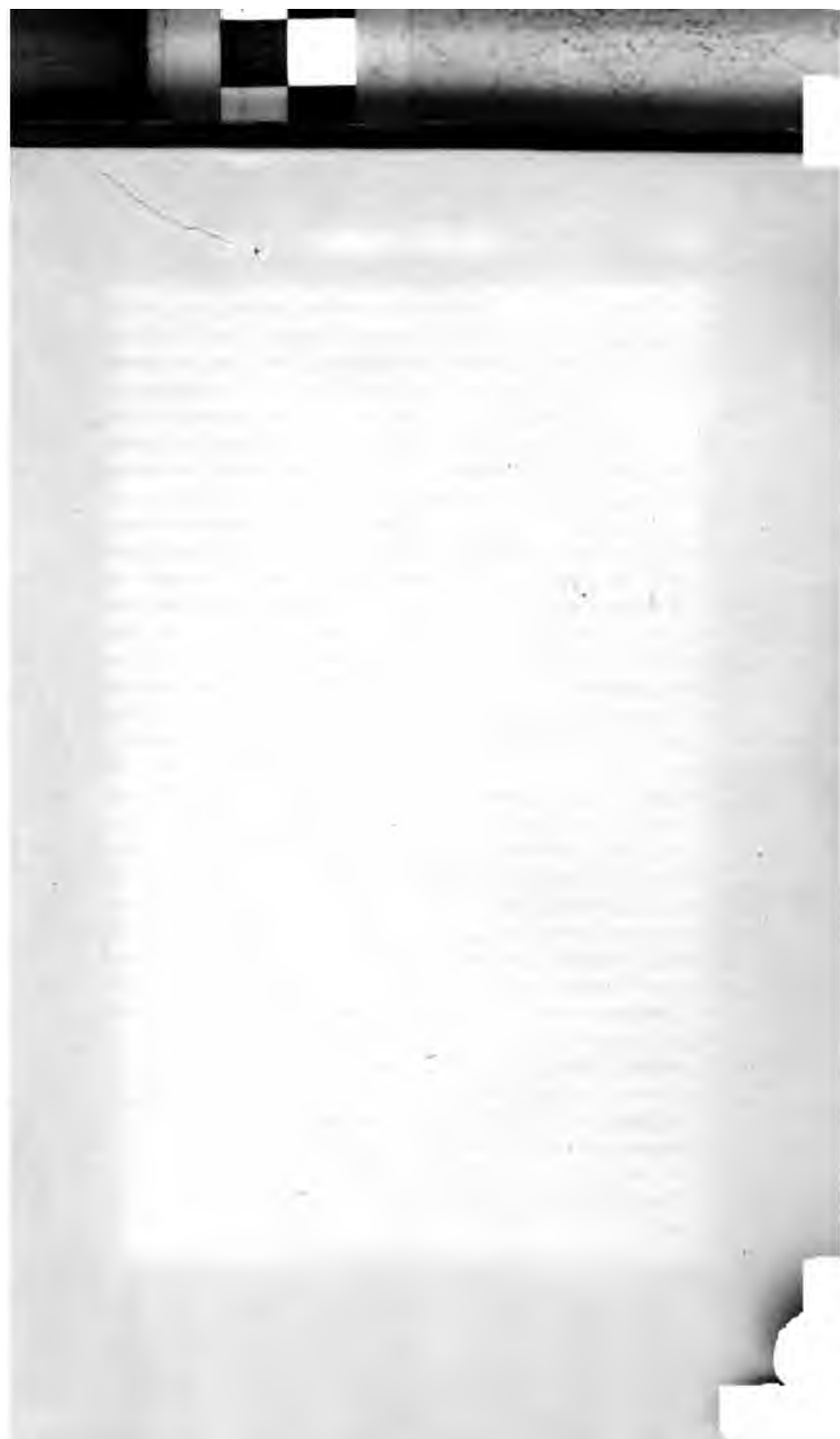
All parts of the inanimate earth, as far as science has been able to investigate its materials or its structure, are the evident workmanship of power guided by wisdom and love. The revolution of the seasons; the exhaustless source of light and of heat; the aerial circuit of the waters; the latent forces of nature which await the summons of man, and stand ready to do his bidding; the parts which cold and heat, electricity and magnetism, attraction and repulsion, play in the grand economy of nature; the principles of life which embody themselves in the myriad forms of vegetation; the structure and instincts of animals, — each so wonderfully fitted to its peculiar sphere; — all of them bear the

impress and signet of a Divine mind and a Divine hand. To the eye of science and of religion, they are all inscribed, within and without, with the evidences of goodness, at once omnipotent, omniscient, omnipresent. They all answer the purpose for which they were created, — obeying in all things the law of their constitution. It is only when we come to man, that we find proofs of lofty powers perverted, of glorious faculties eclipsed, of vast capacities for happiness, not lost merely, but turned into sources of sorrow and pain. He! — the highest of all created beings among which he is placed, mournfully fails of his destiny, if that destiny be happiness acquired through duty; — it is he who sends out the only jarring note that mars the music of the spheres. Great and good men, in all ages, — prophets, apostles, the Saviour, have mourned over this condition of humanity, and have toiled, prayed, agonized, for its recovery to obedience and felicity. They have longed, yearned, labored, for the day, when, with recuperative energies, man should rise from his guilty fall.

And already there has been great amelioration in the condition of the race. Whoever compares distant ages or epochs with each other, will find proofs of the slow, yet steady uprising of mankind. Like the light of the sun upon a dial-plate, we may not be able to see its motion, and yet we can see that it has moved. The fortunes of the race do not revolve in a circle, but in a spiral. So far as any improvement has been effected in the condition of mankind, by human agency; — so far as great national calamities have been averted, so far as great national crimes have been arrested, so far as the ravages of wide social demoralizations have been stayed; the general principle on which all progress and all reforms have proceeded seems to be this: — men wait for an accumulation of evils, — they wait and bear, until the accumulation becomes intolerable, and then they apply themselves to the work of removal or redress. Men waited until twelve centuries of religious persecution had been inflicted upon them, by government, before they took effective measures for the establishment of religious freedom. Our ancestors bore

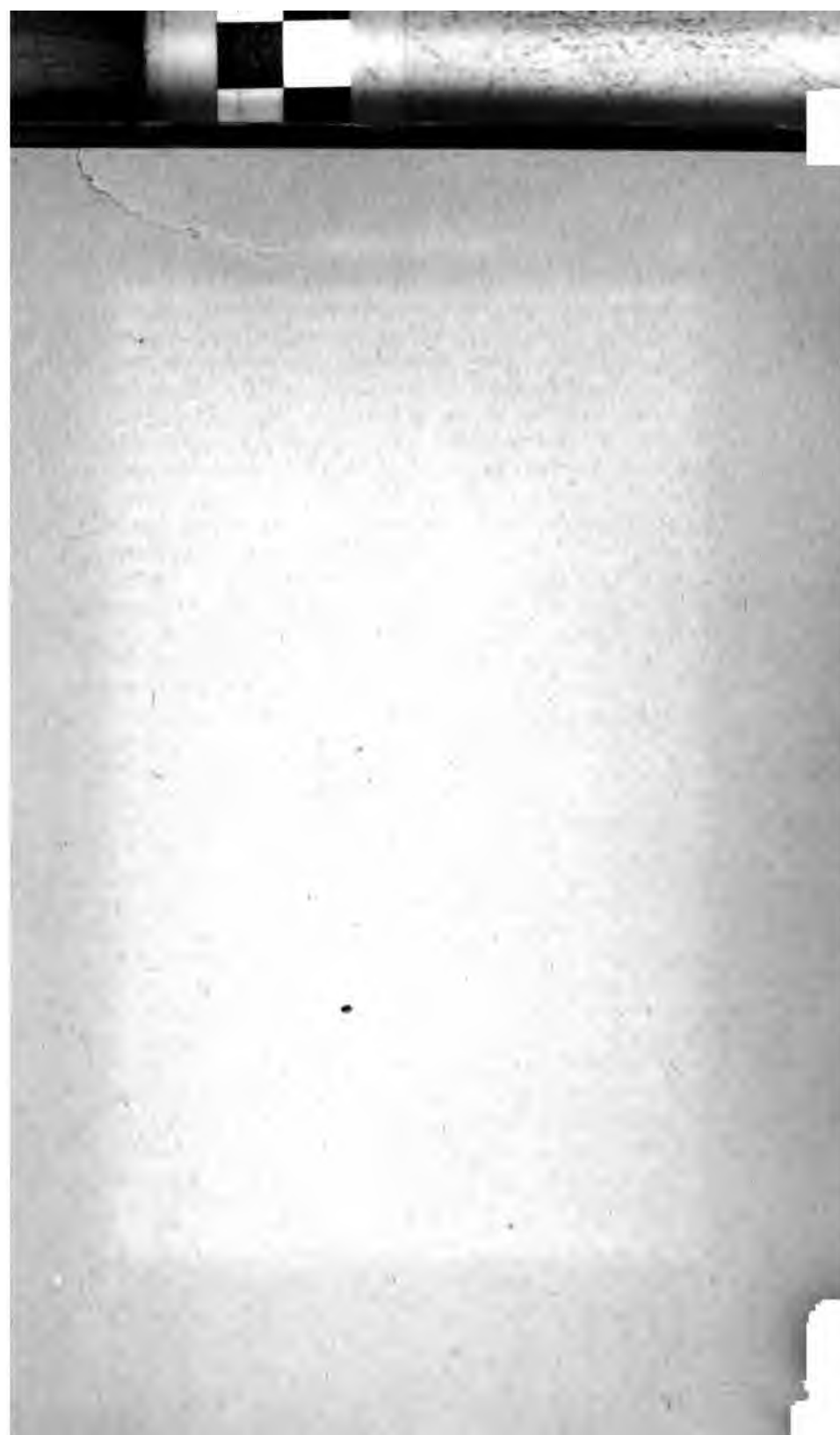
political oppression for a century and a half, before they pledged fortune, life, and honor to resistance. For tens of centuries, men endured all the calamities and horrors of unnecessary war, until the historic aggregate of suffering and crime became too mighty to be longer borne; and it was then only that a portion of mankind began to open their eyes to its folly and wickedness. Men succumbed to the evils of intemperance, until those evils threatened to brutify and demonize the race, before they banded themselves together for disenthralment and ransom. Men looked quietly upon the atrocities of the slave trade, until a continent was emptied, and an ocean filled, with myriads of its victims. And so of those other crimes and calamities which have made the history of the world, like the roll of the prophet, a record of lamentations and mourning and woe. The shrieks, not only of one, but of hundred of cargoes of slaves, fell in vain upon the dumb ear of society. The ruin of thousands and of tens of thousands of men, by intemperance, was insufficient to startle humanity from its guilty slumber. War had to pile the heaps of its slain mountain-high, and to pour out human blood with river-like width and depth, before men could be made to acknowledge its iniquities and its agonies. The fires of persecution burned for ages, the rack labored, the dungeon buried alive, before men vindicated their right to freedom of conscience. And so it has been in regard to all human evils. The first case rouses no man, alarms no man. The first hundred, or, perhaps, thousand cases, are borne with composure, if not with thoughtlessness. They fail to stimulate either government or society to devise or seek for a remedy. Men wait until the tide of evil rises and desolates the land, again and again, before they will erect barriers against the deluge. Men will not hear the wind; they wait for the whirlwind. Men will not take warning from the cloud, they wait for the tempest. And the calamities which spring from ignorance, and a neglect of the social condition of the masses of the people, are no exception to this rule. Republics, one after another, — a splendid yet mournful train, — have emerged into being; they have risen to greatness, and surrounding nations have sought

protection beneath the shelter of their power; but they have perished through a want of intelligence and virtue in the masses of the people. They have been delivered over to anarchy and thence to despotism; and because they would not obey their own laws, they have been held in bondage by the laws of tyrants. One after another, they have been blotted from the page of existence, and the descendants of a renowned and noble ancestry have been made bond-men and bond-women; — they have been dishonored and trampled upon, on the very soil still choral with the brave deeds of their forefathers. Has a sufficient number of these victim-nations been sacrificed, or must ours be added to the tragic list? If men had been wise, these sacrifices might have been mitigated, or brought to an end, centuries ago. If men are wise, they may be brought to an end now. But if men will not be wise, these mournful catastrophes must be repeated again and again, for centuries to come. Doubtless, at some time, they will come to an end. When the accumulation of evils shall be so enormous and overwhelming, that humanity can no longer endure them, the adequate efforts for their termination will be made. The question for us is, has not the fulness of time now come? Are not the sufferings of past ages, are not the cries of expiring nations, whose echoes have not yet died away, a summons sufficiently loud to reach our ears, and to rouse us to apply a remedy for the present, an antidote for the future? We shall answer these questions, by the way in which we educate the rising generation. If we do not prepare children to become good citizens; — if we do not develop their capacities, if we do not enrich their minds with knowledge, imbue their hearts with the love of truth and duty, and a reverence for all things sacred and holy, then our republic must go down to destruction, as others have gone before it; and mankind must sweep through another vast cycle of sin and suffering, before the dawn of a better era can arise upon the world. It is for our government, and for that public opinion, which, in a republic, governs the government, to choose between these alternatives of weal or woe.









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